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FRANK M. CHAPMAN

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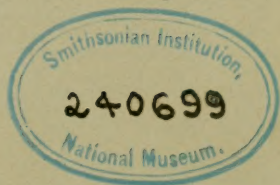
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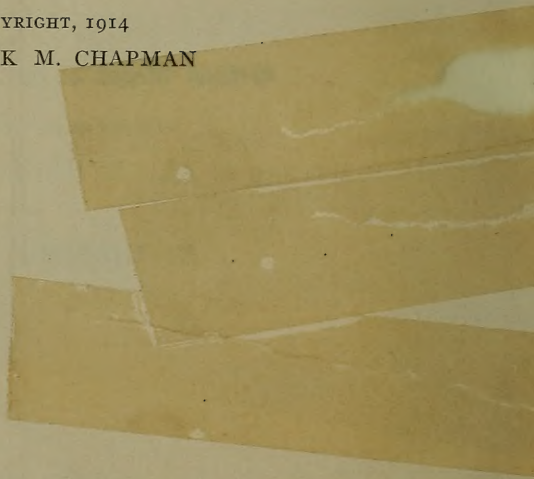


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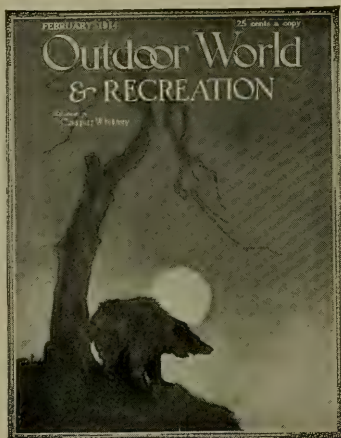
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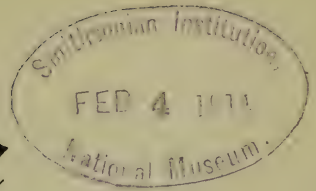


- | | |
|------------------------------|----------------------------------|
| 1. REDPOLL, Adult Male | 4. GREENLAND REDPOLL, Adult Male |
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Vol. XVI

JANUARY—FEBRUARY, 1914

No. 1

Impressions of the Voices of Tropical Birds

By LOUIS AGASSIZ FUERTES

Illustrated by the author

SECOND PAPER—TINAMOUS, PARTRIDGES, AND SOLITAIRES

IN THE tropics, as in more familiar scenes, the birdsongs of the fields are frank, pastoral, and prevalent. With us, the Meadowlark, Field Sparrow, Vesper, and Song Sparrows pipe often and openly, and, from May to October, their notes are almost constantly in the air. But the forest birds are more reluctant singers, and their rare notes are all mystery, romance, and reclusive shyness. The Field Sparrow will sit on a dock-stalk and sing, looking you in the eyes; the Veery will quietly fade away when your presence is discovered.

So it is, even to a more marked degree, in the tropics. In the open pastures and on the bushy slopes of the Andes, one hears the shrill piping of the 'Four-wing' Cuckoo (*Diplopterus*), the insistent *kekking* of the Spurwing Plover, the dry, phoebe-like fret of the Spine-tails (*Synallaxis*), the lisping insect-songs of Grassquits, and, from the bordering forest-edge, the leisurely whistling of Orioles.

But, enter the forest, and all is of another world. For a long time, perhaps, as you make your way through the heavy hush of its darkened ways, no sound strikes the ear but the drip of water from spongy moss-clumps on broad leaves. You feel yourself to be the only animate thing in your universe. All at once, perhaps for off through the forest, perhaps close behind you, you hear the strangely moving whinny of a Tinamou. I think no sound I have ever heard has more deeply reached into me and taken hold. Whether it is the intensity of feeling that a deep, silent forest always imposes; the velvet smoothness of the wailing call; the dramatic crescendo and diminuendo that exactly parallels its minor cadence up and down a small scale; something, perhaps the combination of all these, makes one feel as if he had been caught with his soul naked in his hands, when, in the midst of his subdued and chastened revery, this spirit-voice takes the words from his tongue and expresses so perfectly all the mystery, romance, and tragedy that the struggling, parasite-ridden forest

diffuses through its damp shade. No vocal expression could more wonderfully convey this intangible, subduing, pervasive quality of silence; a paradox, perhaps, but not out of place with this bird of mystery.

Only less appealing are those other chaste singers in the cloud-forest, the Solitaires. It is, indeed, a strange sensation, in uncanny harmony with the unexpected familiarity one always feels in a tropic forest, when, thinking

vaguely of Thrush songs, the silver note of a Solitaire crystallizes the thought. There are many kinds, and they have varied song-types beyond most similarly unified genera. The most typical is simply a lovely Hermit Thrush song, giving that effect of a private hearing so graciously done by our own Thrushes. For some elusive reason, it seems as if these birds always sang as the shy perquisite of the favored few, and thus, perhaps, it is that their songs never become common.

Our own Townsend's Solitaire has a very different melody, a blithe, Grosbeak warble, frequently given in lark-like flight, quite unlike any of the tropical spe-



TINAMOU (*Crypturus*)

cies I have heard. These are all of the chaste, contemplative type, given from a perch part way up in the forest, and in frequent accompaniment of splashing water in mossy and fern fringed ravines. *Myadestes ralloides*, of the Andes, sings almost exactly like a Hermit Thrush, as does *Myadestes unicolor*, of Mexico, while *Myadestes solitarius*, of Jamaica, singing from the tree-ferns up on Blue Mountain, reminded me strongly of the Varied Thrush heard in the dark, cold spruce-flats of the Alaskan coast;—what a transposition! A vibrant, steadily crescendo note, as true as a violin, fading to nothing. Then another in a new key. A rich, descending broken scale followed, after a

pause; then an exceedingly high trill, swelling and dying. These singers were common at about five thousand feet, and their choral chanting was an experience to be long remembered. *Myadestes obscurus*, of southern Mexico, has a song more spontaneous and overflowing than the other tropical species; I thought of a Bobolink when I first heard it. The song began high in the scale, and very loud; then through the rich progression of its bubbling



JAMAICAN SOLITAIRE (*Myadestes solitarius*)

cadences it gradually fell in pitch and lost volume till it died out, as with loss of breath. This is the "Jilguero" of the natives, while *unicolor* is known as "Clarín." Distinguished from these as "jilguero de la tierra" are the wrens of the genus *Leucolehis*, which have a way of singing at your very feet, hidden under the ferns and low-growing soft plants of earth. Theirs too, are violin tones, and, though the songs are not rare, the singer is seldom seen, however patiently you search or wait for him in the mosquito-ridden air of his dripping haunts. It has always seemed a mystery to me how these little birds of the cloud-forest keep dry. They are, indeed, the only dry thing you would encounter in a week's hunt, for overhead all is oozing water, all the leaves are shiny-wet, and under foot is soaking, rotting vegetable mold or deep muddy ooze, that frequently lets you in over your boot-tops.

In the same forests that shelter the Tinamou and Solitaire dwell the evasive and ventriloquistic Woodpartridges (*Odontophorus*). These are richly garbed in velvety, rotten-wood colors, with all the minute moth-like pattern of Whip-poor-wills. But wonderful as is their coat, it is their vocal performance that gives them real distinction, for besides the familiar Partridge clucking and pipping, heard only at close range and therefore seldom, they possess a loud rollicking call that may be heard a mile or more across the forested course of a mountain river.

Once, while I was pussy-footing along a little water trail in the hope of again seeing a Golden-headed Trogon, I was congealed for the moment by a loud, explosive alarm, at the end of a fallen and rotting bole that lay just before me. "*Kivelry, cavalry, kivelry, cavalry, pt', pt', pt', t' t' t' t*, and up popped a brown velvet bird, called once more and dropped, already running, on the other side of the log. The call, at close range, had a rooster-like quality not noticeable in the distance, and I was surprised to see that the whole complicated and rapid performance was the work of one bird.

Perhaps it is a sort of statute of limitations that makes us constantly compare new birdsongs with familiar ones at home;—perhaps it is the paucity of our language that renders description almost futile. But occasionally a resemblance is so striking that no alternative suggests itself. Sweltering in the heat and glare of the Andean foothills, veins throbbing with the exertion of the climbing hunt, exhaustion screaming for a let-up, and temper getting thin, something turns over inside one when, of a sudden, comes the cheery, old-home 'Bob-white' of the little crested *Eupsychortyx* Quail. Appearances would never suggest the close relationship, but this little fellow, three thousand miles from home, says 'Bob-white' without a trace of accent, striking a primitive chord that does queer things, for the moment, to the inner *you*, caught unawares!

Notes on How to Start a Colony of Purple Martins

By THOS. L. McCONNELL, McKeesport, Pa.

With a diagram by the author

UNDOUBTEDLY a great many interested bird-lovers would start colonies of Purple Martins if they knew what to do and how to get about it. An interesting elderly physician who likes to talk about birds told me that, if he could only get a pair of Purple Martins, he would put up a bird-box right away, and then added that there were never any around. Possibly he needs a bird-house catalogue, with full instructions.

The Martin has a strong tendency to cling to its old home and associations, and, unless driven out by the English Sparrow, only the immature (last year's young) birds seek new quarters. Generally it is an easy task to start a new colony where there are colonies in the immediate neighborhood.

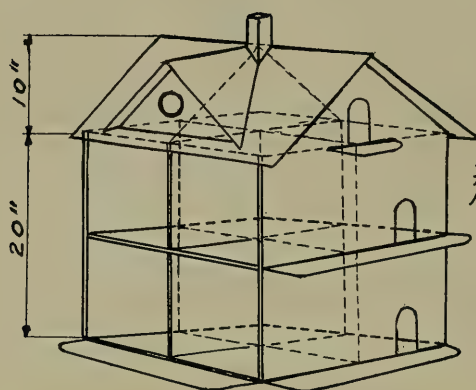
They prefer the old weather-beaten box to the new one, smelling of new lumber and paint, when other things are the same. This may be tested by putting up one bird-house of each kind. Invariably, the old storm-beaten box will fill up, while a single pair may select the new one. New boxes, even if erected near other Martin colonies, will be more popular after the first season. Of course, there are exceptions to this rule. The writer has found it expedient to age the new bird-house by smearing the inside of all the rooms with wet mud or clay, which seems to please the birds.

When one prefers to paint the bird-house for a new Martin colony, select inconspicuous colors, such as a pearl or stone color, and paint the pole black. Plain white without trimmings seems to harmonize with the nature of these birds. White, unless otherwise specified, is the standard rule for painting bird-houses for Martins by one of the leading bird-house companies. After a colony is a year or so old and well established, there is little objection to painting and, moreover, it is advisable to do so in order to preserve the wood and beautify the structure.

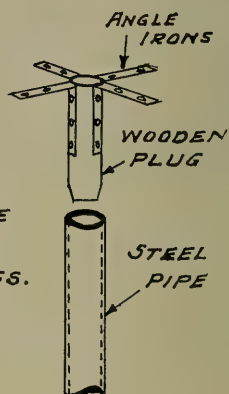
An eight- or ten-room house is usually large enough for the first year's experiment. The rooms should be about 8 x 8 x 10 inches high, and each room should be separate and have but one entrance. The entrances or holes into rooms are commonly of three types: round, about $2\frac{3}{4}$ inches diameter; square or rectangular, about $2\frac{1}{2}$ inches x $2\frac{1}{2}$ inches; or a combination of the first two, which gives a pretty opening with the arch. The last two types have the advantage of allowing greater accessibility for cleaning out Sparrows' nests. The regular entrance will give sufficient ventilation for each room, and no other holes should be provided. The rooms should be draught-proof, and be covered with a water-tight roof. Separate platforms may be provided in front of each opening, for the Martins love to sit around and rest or sun themselves.

A very important point is the location of the bird-house. Choose an open space, if possible, away from the shade of trees and free from buildings.

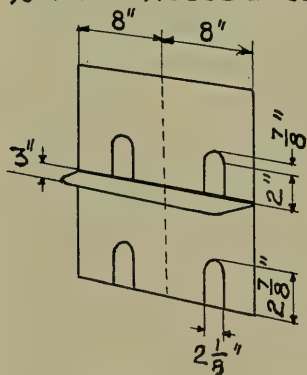
BIRD HOUSE FOR PURPLE MARTINS



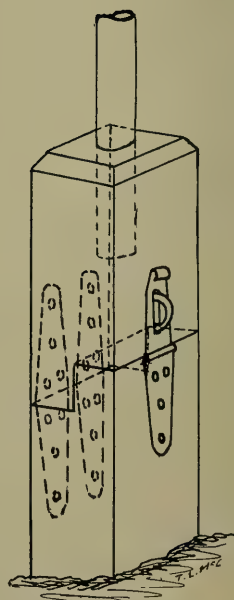
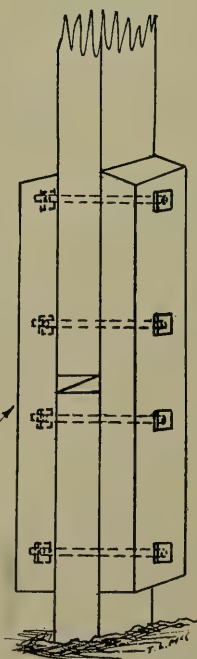
BACK SIDE
TO FACE THE
NORTH AND
HAVE NO
OPENINGS.



10-ROOM HOUSE - FRONT REMOVED



THE REMOVAL OF ONE
BOLT ALLOWS THE POLE
TO SWING DOWN TO
THE GROUND



HINGED POLE FOR
BIRD HOUSE

SKETCH, NOT TO SCALE.

The box should be placed on a high pole, at least sixteen feet above the ground.

The box should be ready about the first day of April for new colonies, but several weeks later will do for old colonies. Many new boxes have been taken up by the Martins as late as the first of June, and non-breeding birds may come during June and July.

A hinged pole, which allows the box to swing down to the ground, is a great convenience, and has many obvious advantages. By all means make the pole cat-proof and, still better, take the additional precaution of exterminating locally the cat, the birds' worst enemy.

The Martins require assistance in their continuous struggle with the English Sparrow, if you do not want to see this beautiful Swallow driven away.

There are many ways to aid these birds: One of the best is everlastingly to rid the bird-houses of all Sparrow nests, beginning about the first of April, and continuing even after the Martins appear to be in full possession. Every once in a while a pair of sly Sparrows will slip into one of the rooms and fill it full of rubbish while the Martins are away, not to say anything about how they like to eat the eggs of the Martins. A claw-hook fastened to a long stick makes an ideal cleaning tool.

Shooting is a first-class way to make the English Sparrow go, and this is effective only when both male and female are killed. When only one is killed the other one brings around a new mate the next day. Where a city or town ordinance prohibits shooting, the fourth of July is a glorious day to make up for lost time, and destroy a lot of pests. It is not necessary to shoot every Sparrow, as a few judicious shots are sufficient in most cases.

Poisoning is a very good method to thin out the hosts of English Sparrows, but is most effective as a winter treatment. For more information, see U. S. Department of Agriculture Farmers' Bulletin 383, "How to Destroy English Sparrows," which is sold by the Superintendent of Documents, Washington, D. C., for five cents a copy.

A new enemy of the Martin is the Starling (*Sturnus vulgaris*), a recent importation from England, which has gained a strong foothold in many of the states along the Atlantic seaboard. The writer has yet to see a Starling in western Pennsylvania, and intends to treat them like their cousins, the English Sparrow.

Many persons who formerly have put up bird-houses for the Martin only to see them crowded with Sparrows have given up in despair. They should remember that to start and to hold a colony of Martins is a pleasure for the bird-lover, requiring perseverance and patience in fighting against their enemies. One should not become discouraged with a failure the first year. Nothing that comes easily is worth much.

Winter Feeding

By W. L. SKINNER, Proctorsville, Vt.

With photograph by the author

BIRD study has in recent years undergone a great change. Formerly the outfit of a bird student was chiefly a shot-gun and a scalpel; today it is the camera, feeding-table, and field-glass. One cannot read Audubon without being convinced of the great appreciation and love he had for birds; yet his love for science was even greater, and we regret that the destruction of so much bird life should have seemed necessary.

Ninety-nine out of every hundred of us interested in birds do not want a bird's stomach cut open to find out just what he has been eating, nor do we care what the formation of bone and muscle may be. These things about a bird we do not love, but we do love beauty of form and color, his song, sociability, and intelligence. As birds learn to trust us and feel secure with us, the more strongly are these and other features brought out. For instance, the peculiar squirrel-like habit of the Nuthatch and Chickadee in hiding bits of food in winter-time for future use, searching diligently to find a nook or cranny just to their liking and many other odd items of interest which may be learned only when we become intimate with a bird.

Suet is used largely as a winter food, and is good so far as it goes; but, at best, it is a substitute for other food.

The writer lives in a butternut country, and for a number of years has used this nut in feeding birds. It is a rich, nutritious, oily, and, we might say, natural food for winter birds; at any rate, birds will leave suet at any time for butternuts. On account of the Chickadees' habit of storing food, it is better to crack the nut on the side, which makes a lot of fine crumbs; otherwise large quantities will be carried off and hidden.

A Purple Finch friend of mine would partake of hemp seed, but he was exceedingly fond of butternut. This bird appeared with the Chickadees one morning, and in twenty-four hours had become so tame that he would respond to my whistle by flying into my hand for his favorite food. At times a Chickadee would alight in the same hand. This the Finch would resent by advancing toward the Chickadee with open mouth, scolding and using bad language generally. The Chickadee also, with open mouth, would hang on as long as he dared, his body and head thrown back; and the two birds, thus facing each other, presented a ludicrous and most interesting sight. I made one or two snaps with the camera at them but, owing to some one of the uncertainties of photography, the result was not satisfactory.

Redpolls would not eat butternut, but four or five of them would crowd into the hand after millet seed. Finding an Acadian Chickadee one day, I advanced slowly toward him, and held out part of my lunch (a doughnut). He showed the same confidence that his black-capped relative does, and

fluttered within a few inches of the outstretched hand several times, but did not quite dare accept me on so short acquaintance. Chickadees, when fed at a window, get into the habit of searching other windows for food and, if one happens to be open, they are sure to fly in, and will injure themselves by flying against the window-glass, or they will even fly into neighbors' houses. One of my Chickadees was killed during my absence by the well-meaning but awkward efforts of a young relative. To release a bird, pull down every shade quickly, throw up one window, and lift the shade up as far as the window opening, and the bird will make his way out without injury. Birds should not be fed at windows at all, but entirely out-of-doors.



A BIRD IN THE HAND

Another Chickadee lit on the pipe of a man walking on the railroad nearly a mile away. The man believing that he was about to have his eyes pecked out by some freak bird, made several passes at the Chickadee before his companion, who knew of my birds, could enlighten him.

The writer does not believe in the use of the feeding-house having glass sides. If a feeding-table is protected from snow and rain, that is sufficient. Finally, the question of making pets of birds should be looked at from all angles, and the interests of the birds served in each case, as best we may.

The philosophy of California John, in 'The Cabin,' is delightful. On being urged to tame a certain wild fawn he frequently met, he observed: "Oh, he'd gentle all right, but, 'Ma'am, I don't believe in gentling no wild critter whatever that I can't take care of. It makes it easy for the first fellow with a gun

or claws that comes along." The writer has known, and knows of a number of tame deer, and in every case they met with a violent or premature death; and that, too, regardless of whether they had their liberty or were kept in an inclosure. Is this not the end of every wild bird or animal? Do birds that we have made pets of end their career sooner than their wilder brothers? To know a bird individually gives us a great deal of pleasure, but are there not various view-points to be considered?

City Nighthawks

By CLINTON G. ABBOTT

Photographs by the author



"THE MOST CONVENIENT COIGN
OF OBSERVATION"

THAT "Charity begins at home" is admitted by all. But that wild-bird photography may begin at home—without even so much as going outside the front door—would doubtless be questioned by many. Even stranger would such a proposition appear when "home" is in the midst of a great city. Yet the proof is found in the accompanying photographs, which were taken upon the roof of a house in one of Brooklyn's most closely built sections.

The bird which exhibits this strange affinity for the city's roar and inhospitable masonry is the Nighthawk, normally a shy and retiring inhabitant of barren fields and lonely wastes. Whether the level monotony of city roofs reminds it of the plains, whether its insect food abounds in the urban atmosphere, I cannot say; but the fact remains that annually many of these birds spend the summer in large cities, where, as evening approaches, they may be seen cavorting above the chimney-tops and uttering their harsh cries. The

female lays her two mottled eggs, without the slightest pretense of nest-building, on a bare, flat roof—always selecting for this purpose a roof of the tar and gravel variety.

Many an evening in June I have searched the house-tops of the block where I live in New York in an attempt to find a Nighthawk's nest; or have watched until dark, hoping to follow one of the birds to its home roof, but I have always been unsuccessful. All I have seen were fascinating exhibitions of the Nighthawk's strange idiosyncrasies of flight—the erratic flaps and pauses, the bat-like waverings, and the rushing, roaring descents that well give the bird its colloquial name of 'Bull-bat.' And at night I would awake to hear, through the open window, the grating "beedz," "beedz," carried from the starlit sky, as though taunting me.

I was therefore delighted when, on July 20, 1906, a telephone call at my office informed me of the discovery of a Nighthawk's nest on a roof in Brooklyn. With rare discrimination, the bird had selected the home of Dr. Wm. C. Braislin, a well-known ornithologist and member of the A.O.U.!

Emerging from his front door, he had seen the neatly chipped half of a Nighthawk's egg lying upon the doorstep, which told him quite plainly that a pair of twins had been born in the sky-parlor—with the resultant hurry call for the bird photographer.

At the close of the business day, I snatched my camera and hastened to Dr. Braislin's home. It was about 6 P.M., as we mounted the ladder leading to the roof. Silently we raised the hatch and



"QUEER LITTLE GRAY FUZZY CHICKS"



"SHE TRAILED HER WINGS PITIFULLY"

peeped out. There was the mother Nighthawk brooding her callow young amid the incongruous surroundings of chimneys, cornices, and tin roofs. Cautiously creeping up on my knees (by reason of the gravel a distinctly uncomfortable procedure!), and slowly pushing in front of me my old-fashioned tripod camera, I took two pictures at varying distances. The Nighthawk sat motionless with eye half closed, as though dozing. But it is evident that she was watching me closely; for, as soon as I had approached within about ten feet, with a sudden start she flopped to one side and, as though painfully injured, went shuffling across the roof. She trailed her wings pitifully and gave every other evidence of helplessness in her efforts to induce us to follow after her. But, when she discovered that she could not decoy us away in this fashion, she abandoned her tactics and took up her position on the most convenient coign of observation—a chimney. Motionless, she watched to see what we would do to her babies. We noted that she stood lengthwise on the chimney, not across it,—a habit doubtless inherited from generations of ancestors who have found this attitude on the limbs of trees inconspicuous and protective for the diurnal sleep. In fact, she assumed the same position wherever she chanced to perch—whether on parapet, cornice, or coping—as, in my attempts to stalk her with my camera, I scared her from one point to another.

We then turned our attention to the two queer little gray fuzzy chicks, so unceremoniously uncovered, yet apparently quite unperturbed. They made



"AMID THE INCONGRUOUS SURROUNDINGS OF CHIMNEYS, CORNICES
AND TIN ROOFS"

not the slightest motion beyond that caused by their breathing, and squatted close to the uncomfortable-looking pebbles.

However we may criticise the Nighthawk for deserting the pure air of the country for the city's grime and smoke, we must admit, at least, that in the tar-and-gravel roof she has selected about as admirable a background as could be found for the concealment of herself and her offspring. The downy chicks, especially, were practically invisible from a short distance, and they added to the delusion by their motionless crouching. They permitted unlimited time exposure from every angle, till the sun was gone altogether and we were obliged to withdraw from the roof.

Some Results of Bird-Lore's Christmas Bird Censuses

By E. H. PERKINS

THE following curves and diagrams are based on the Christmas Bird Censuses published in BIRD-LORE from 1901 to 1911. In the great accumulation of data in these reports much can be learned on the winter distribution of a given species over a series of years. In the figures given in this article, I have plotted the rise and fall in numbers of ten species of winter birds over an area including New England and New York. The species have been selected from the two classes into which our winter birds fall. From the regular residents I have taken the Chickadee, White-breasted Nuthatch, Downy Woodpecker, and Brown Creeper. The irregular winter visitants are represented by the Red-breasted Nuthatch, Pine Siskin, Redpoll, Pine Grosbeaks, and the Red- and White-winged Crossbills. In plotting the curves, the years are taken as the abscissas, while the ordinates are found by dividing the total number of individuals seen each year by the number of reports for that year. In figure II the scale of the ordinance is twice that in Figure I, otherwise the curves of the birds in Figure II would be too flat to show well. The curves start with 1901, as I was unable to obtain the census for 1900.

There seems to be some evidence that the various species of birds rise and fall together in abundance. This is best seen between 1905 and 1907. The year 1906 was one of abundance for almost all species. This year was preceded and followed by years of general scarcity. About 1903 and 1904, and again in 1908, there seems to have been a more or less general rise in abundance.

It might be expected that the curves of the regular winter residents would be fairly regular, and that those of the boreal species would be more or less jagged. This expectation is, in every case but one, borne out by the facts. The exception is the Chickadee. This bird is an abundant permanent resident over the area under consideration, and a regular curve might be expected. The fact is that the Chickadee shows one of the most irregular of all

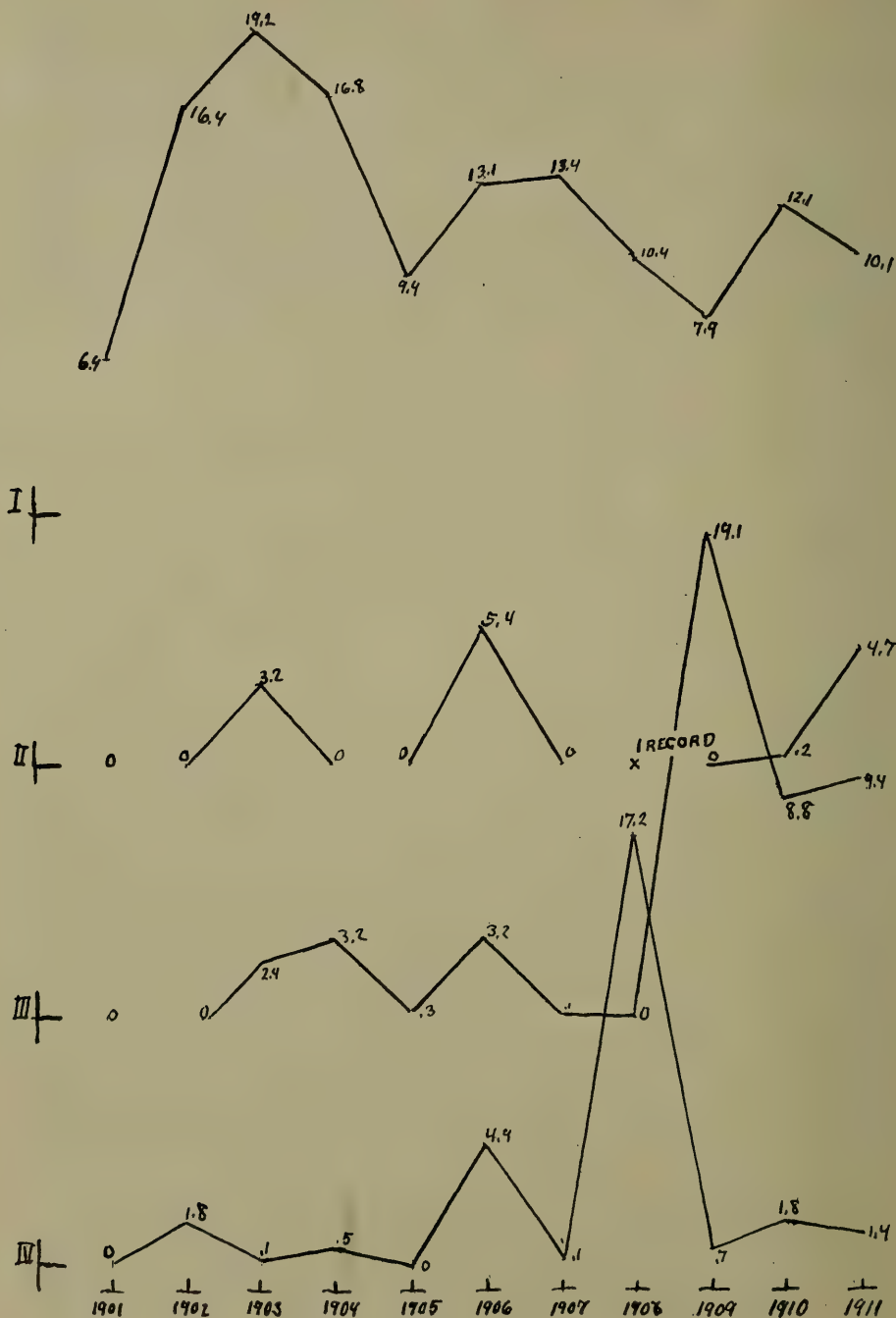


FIG. 1. CURVES OF (I) CHICKADEE, (II) PINE GROSBEEK, (III) PINE SISKIN, AND (IV) REDPOLL

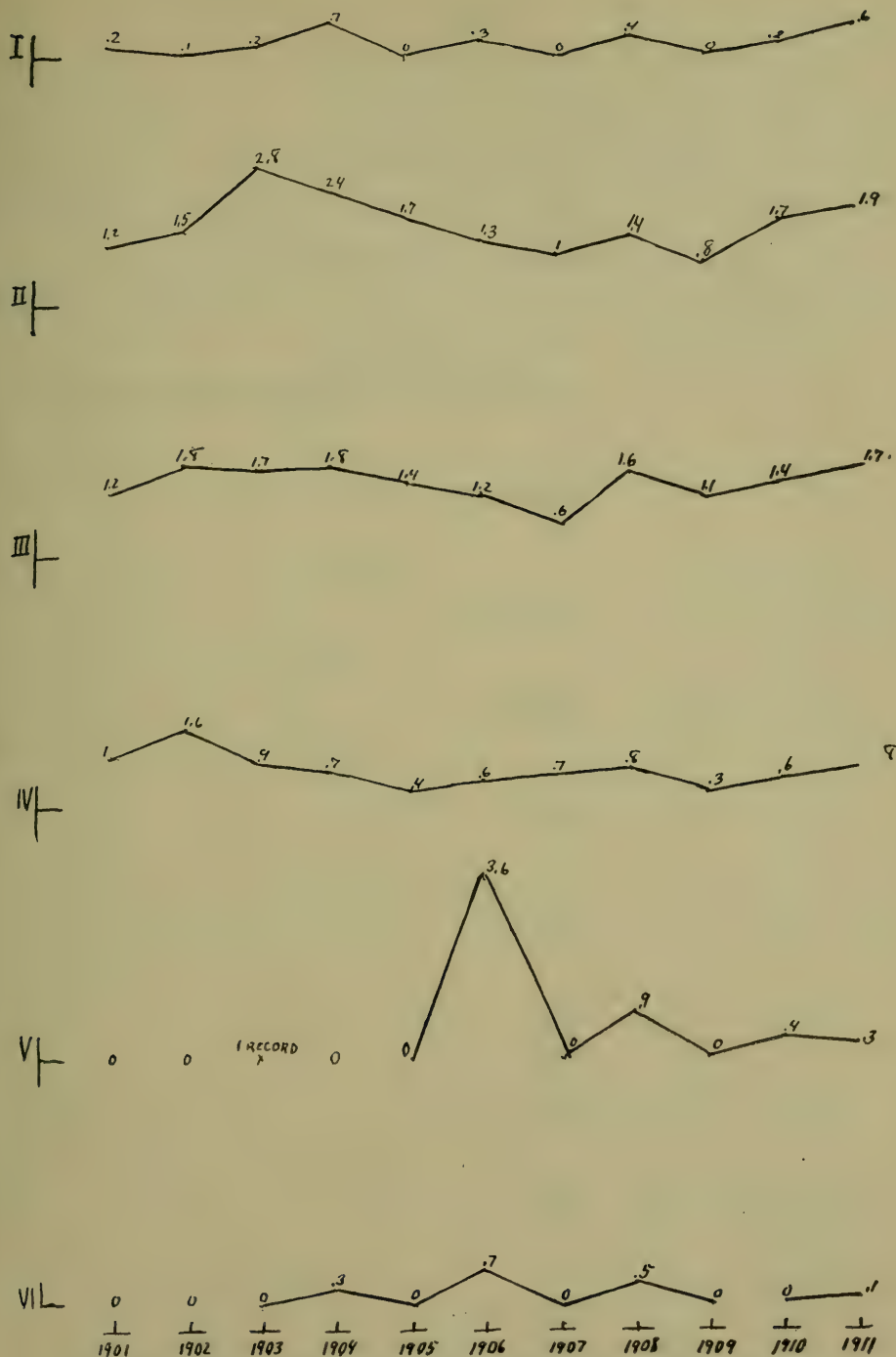


FIG. II. CURVES OF (I) RED-BREASTED NUTHATCH, (II) WHITE-BREASTED NUTHATCH, (III) DOWNY WOODPECKER, (IV) BROWN CREEPER, (V) WHITE-WINGED CROSSBILL, AND (VI) RED CROSSBILL.

the curves. Starting from its lowest ebb in 1901, the species rose in abundance until it reached its maximum. Since then there have been two more waves of abundance, reaching their cumulations in 1907 and 1910 respectively. In neither of these years, however, was the bird so abundant as in 1903. It should be noted that no birds except the Redpoll and Pine Siskin have ever reached the lowest mark of the Chickadee.

In sharp contrast to the curve of the Chickadee stand the curves of the other common winter birds—the White-breasted Nuthatch, Brown Creeper, and Downy Woodpecker. The curves of these birds are very regular, showing,

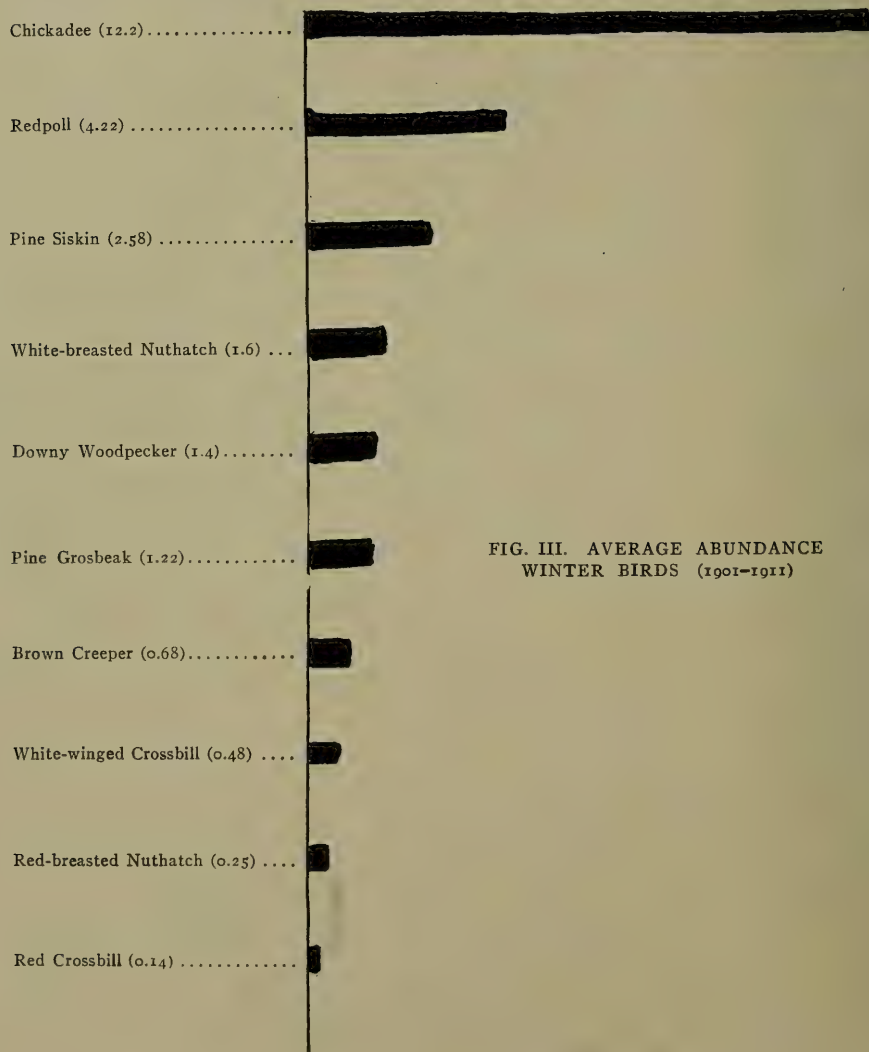


FIG. III. AVERAGE ABUNDANCE
WINTER BIRDS (1901-1911)



FIG. IV. PERCENTAGE OF REPORTS CONTAINING SPECIES. (1901-1911)

as a rule, only slight changes from year to year. The Creeper, which is the most migratory of the three, shows the smoothest curve.

The curves of the boreal birds, on the other hand, are very irregular. The Red-breasted Nuthatch and the Crossbills for a series of winters appear and are absent on alternate years. The Pine Grosbeak, as a rule, seems to appear in abundance after every two years of absence. The curves of the Pine Siskin and Redpoll are remarkable for the great waves of 1908 and 1909, respectively. 1908 was one of the 'bird winters.' Southern birds were common north of their normal winter range, while, for some reason, boreal birds came south in greater numbers than usual. This was the year of the Siskin wave, but it was

also the first year since 1902 when there had been no Redpolls. The next year was one of scarcity. The curves show that all the birds fell off, while the Chickadees reached their lowest mark for eight years. Then the flocks of Redpolls came in numbers that barely missed the highest mark of the Chickadee in 1903. Why the Redpolls came in 1909, instead of in 1908, is one of the many mysteries of the bird migrations. For the last two years, the Redpolls although less abundant than in 1909, have remained far above their usual numbers.

The average abundance of the selected species for the last ten years is shown in Figure III. The figures are obtained in the same manner as the ordinates of the curves. The total number of individuals seen is divided by the total number of reports for the ten years. The diagram shows the remarkable fact that Redpolls and Pine Siskins are, on the average, more abundant than such common regular residents as the White-breasted Nuthatch and Downy Woodpecker. This is due to the great waves of Redpolls and Siskins mentioned above. This is not the true state of affairs in an average winter. Everyone knows that, while at times Redpolls and Siskins may be more abundant than Nuthatches and Downy Woodpeckers, the latter are to be ranked among our few everyday birds.

Figure IV indicates more nearly the relative abundance for an average winter. The diagram shows the percentage of the total number of reports that contain the species under consideration. Here the regular winter residents stand ahead of the irregular visitants, like the Siskins, Redpolls, and Crossbills.



The Migration of North American Sparrows

TWENTY-SIXTH PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

(See Frontispiece)

REDPOLL

The common form of the Redpoll breeds from ocean to ocean in the northern two-thirds of Canada, and comes south in winter into the northern half of the United States.

SPRING MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Beaufort, S. C.....			February 23, 1901
Fort Runyon, Va.....			February 19, 1875
Washington, D. C.....			February 12, 1899
Philadelphia, Pa. (near).....	4	March 18	March 24, 1888
Norristown, N. J.....	5	March 18	March 28, 1888
Northern New Jersey.....	10	April 8	April 18, 1888
Portland, Conn.....			May 11, 1900
Providence, R. I. (near).....	4	March 19	April 21, 1886
Central Massachusetts.....	12	April 1	April, 21, 1907
St. Johnsbury, Vt. (near).....	8	April 17	April 29, 1887
Southern Maine.....	15	April 13	May 5, 1911
Phillips, Me.....	3	April 22	May 8, 1909
Quebec City, Canada.....	3	April 23	April 28, 1894
Montreal, Canada.....			May 5, 1909
Scotch Lake, N. B.....			May 3, 1910
Pictou, N. S.....			April 28, 1895
North River, Prince Ed. Island.....	2	April 29	May 2, 1891
Brownsville, Tenn.....			January 9, 1884
St. Louis, Mo.....			February 7, 1883
Canton, Ill.....			April 17, 1894
Northern Ohio.....	6	April 8	April 15, 1891
Northern Michigan.....	3	April 12	April 19, 1895
Ottawa, Ont.....	6	April 9	May 14, 1909
Southern Ontario.....	6	April 21	May 12, 1885
Central Iowa.....	4	April 8	April 25, 1885
Central Wisconsin.....	6	April 13	April 23, 1883
Baldwin, Kans.....			March 13, 1875
Long Pine, Nebr.....	2	March 18	March 20, 1897
Southeastern South Dakota.....	3	April 4	April 9, 1904
Northern North Dakota.....	3	April 16	April 18, 1909
Aweme, Manitoba.....	9	April 19	May 2, 1902
Osler, Sask.....			April 20, 1893
Edmonton, Alberta.....			May 8, 1903
Denver, Colo.....			April 27, 1907
Terry, Mont.....	4	April 14	April 17, 1896
Stony Plain, Alberta.....	2	May 4	May 7, 1909
Banff, Alberta.....	2	May 9	May 12, 1909
Fort Klamath, Ore.....			May 9, 1878
Okanagan, B. C.....			May 2, 1907

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Okanagan, B. C.....	4	October 25	October 16, 1889
Eagle Lake, Calif.....			November 30, 1899
Banff, Alberta.....			September 22, 1909
Columbia Falls, Mont.....	4	October 24	October 7, 1895
Terry, Mont.....	3	October 29	October 23, 1903
Boulder, Colo.....			October 21, 1911
Aweme, Manitoba.....	10	October 14	September 14, 1901
Sioux Falls, S. D.....	2	November 1	October 30, 1910
Gresham, Nebr.....			November 16, 1896
Elk River, Minn.....	2	November 1	October 31, 1883
Lanesboro, Minn.....	2	November 5	October 31, 1887
North Freedom, Wis.....			October 2, 1904
National, Ia.....	2	November 10	November 8, 1908
Southern Ontario.....	4	October 27	October 10, 1888
Northern Michigan.....	3	October 26	October 14, 1894
Camden, Ind.....			November 5, 1878
Chicago, Ill.....	4	November 2	October 14, 1906
New Haven, Mo.....			November 18, 1903
Hickman, Ky.....			December 10, 1886
Brownsville, Tenn.....			January, 9, 1884
North River, Prince Ed. Island.....			October 4, 1887
Pictou, N. S.....			October 13, 1894
Scotch Lake, N. B.....	6	October 19	October 14, 1904
Montreal, Que.....			October 23, 1910
Phillips, Me.....	5	October 21	October 5, 1911
Southern Maine.....	11	November 6	October 26, 1910
Jefferson, N. H.....			October 24, 1910
West Barnet, Vt.....			October 22, 1910
Central Massachusetts.....	6	November 7	October 29, 1889
Northern New York.....	4	November 18	November 5, 1889
Portland, Conn.....	4	December 8	November 27, 1889
Morristown, N. J.....	4	December 19	December 11, 1910
State College, Pa.....			December 12, 1908
Baltimore, Md.....			January 17, 1897

The dates given above refer to the movements of the common form of the Redpoll, *linaria*, but there is also another form of this bird called Holboëll's Redpoll, which breeds probably in northeastern Asia and northwestern North America, and in migration comes southwestward into the northern United States. It is rare, but has been taken at Koshkonong, Wis., January 22, 1867; Meridian, Wis., January 22–April 3, 1896; near Iowa City, Ia., January 18–February 22, 1896; Chicago, Ill., November 2, 1878; North Bridgton, Me., November 25, 1878; Gorham, Me., February 3, 1903; Swampscot, Mass., March 26, 1883; Lexington, Mass., March 10, 1890; and Ossining, N. Y., February 12–13, 1883. Thus these New England birds have migrated east about two degrees for each degree they have moved toward the south.

There is still another subspecies, the Greater Redpoll, *rostrata*, which breeds in Greenland, and migrates in winter southward to the United States as far west as the Rocky Mountains. It is more common than the Holboëll's, but, as compared with the common Redpoll, it is a rare visitant. It was taken at Erie,

Pa., March 31, 1893; Princeton, N. J., February 6, 1872; New Haven, Conn., December 17, 1878; Providence, R. I., March 14, 1896; Boston, Mass., December 26, 1906, April 10, 1907, and November 1, 1910; abundant at Revere Beach and Nantasket Beach, February 19-22, 1883; Westbrook, Me., January 26-February 27, 1896, and December 12, 1903; Houghton, Mich., November 20, 1904; near Iowa City, Ia., January 18-25, 1896; Meridian, Wis., January 9, March 26, 1896, and Magnolia, Colo., December 9, 1895. This last individual had traveled twice as many degrees to the west as to the south.

HOARY REDPOLL

The Hoary Redpoll breeds in the high Arctic regions of North America, and comes south in the winter as far as the northern United States. The beginning of the fall migration was noted September 19, 1903, when flocks appeared at Fort Franklin, Mackenzie. Some fall or early winter records in the United States are: Cambridge, Mass., November 15, 1880; Swampscot, Mass., November 16, 1878; New Haven, Conn., November 24, 1906; Meridian, Wis., December 13, 1895; Sault Ste Marie, Mich., December 7, 1899, and Fairbault, Minn., December 15, 1883. It was noted in southern Ontario at Guelph December 8 and 26, 1903, and was fairly common at Milton the winter of 1882-3.

It has remained at Cambridge Mass., in the spring until March 20, 1888; Hamilton, Ont., April 6, 1885; Meridian, Wis., March 26, 1896; Miles City, Mont., March 12, 1900; Winnipeg, Manitoba, April 3, 1900; Indian Head, Saskatchewan, April 17, 1892, and Fort Simpson, Mackenzie, April 30, 1860 and May 10, 1904.

Another subspecies of this bird—the Greenland Redpoll—has only one record in the United States, that of a single bird taken March 29, 1900. at Sault Ste. Marie, Mich.

PURPLE FINCH

The breeding range of the Purple Finch includes southern Canada east of Alberta, and the neighboring portions of the United States south to Minnesota, Michigan, Pennsylvania (mountains), and Long Island. The great bulk of the individuals winter south of the breeding range, but a small percentage remain at this season, farther north in the southern part of the breeding range, and sometimes even to the middle part. There is therefore a broad belt, covering at least a third of the entire range of the species, in which migration dates are unsatisfactory, because the records of real spring migration are so mixed with notes on birds that have wintered. The case is made more involved by the fact that the Purple Finch is normally a late migrant, so that there are, in reality, two sets of notes, one of birds that have wintered unnoticed in the deep woods and are recorded when they spread to the open country during the first

warm days of spring, and the other of migrants from the south that arrive two to six weeks later.

Thus at Madison, Wis., during nine years of observation, the average date of the first seen for five of these years is April 21, probably a fair average date of arrival for this district, while, during the other four years, the average date is March 27, representing birds that had wintered not far distant. Even at Ottawa, Ontario, which is well toward the northern limit of the breeding range, the dates of the first seen during twenty-two years are for three years in February, ten in March, six in April, and three in May. The above facts show the reason for the lack of a regular progression in the dates as given in the following tables.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Renovo, Pa.....	11	April 16	March 11, 1897
Alfred, N. Y.....	23	April 1	March 4, 1910
Ballston Spa., N. Y.....	13	April 10	March 18, 1903
Center Lisle, N. Y.....	22	April 5	March 13, 1886
Ithaca, N. Y.....	8	March 19	March 14, 1906
New York City, N. Y. (near).....	15	April 15	Rare, winter
Hartford, Conn.....	14	April 6	February 6, 1888
Jewett City, Conn.....	17	April 9	February 24, 1905
Providence, R. I.....	9	April 10	January 1, 1911
Beverly, Mass.....	13	April 2	March 12, 1905
St. Johnsbury, Vt.....	13	April 5	February 12, 1905
Hanover, N. H.....	6	April 8	March 7, 1886
Plymouth, Me.....	10	April 20	March 26, 1882
Quebec City, Canada.....	9	April 2	March 6, 1907
Scotch Lake, N. B.....	7	April 18	February 4, 1901
Pictou, N. S.....	4	April 14	February 20, 1887
North River, Prince Ed. Island.....			April 1, 1891
St. John, N. F.....			April, 18, 1883
Chatham, N. B.....	9	May 11	April 28, 1897
Chicago, Ill.....	7	March 24	January 9, 1896
Sedan, Ind.....	4	March 19	March 11, 1887
Petersburg, Mich.....	4	April 9	March 17, 1889
Houghton, Mich.....			February 23, 1905
Ottawa, Ont.....	12	March 18	February 20, 1909
Strathroy, Ont.....	9	April 14	April 5, 1897
Grinnell, Ia.....	5	March 30	March 28, 1889
La Crosse, Wis.....	5	March 30	March 19, 1910
Lanesboro, Minn.....	5	April 7	January 1, 1893
Minneapolis, Minn.....	8	March 28	March 11, 1889
White Earth, Minn.....	2	April 22	April 19, 1882
Aweme, Manitoba.....	10	April 23	March 22, 1910
Edmonton, Alberta (near).....	7	May 4	April 19, 1910
Osler, Saskatchewan.....			May 4, 1909
Fort Chipewyan, Alberta.....			May 17, 1901

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Talladega, Ala.....			April 16, 1898
Kirkwood, Ga.....			April 7, 1903
Raleigh, N. C.....	5	April 23	April 30, 1890
Western North Carolina.....	5	April 22	May 23, 1885
Lynchburg, Va.....	4	April 27	May 5, 1899
French Creek, W. Va.....	4	May 4	May 8, 1893
Washington, D. C.....	15	May 9	May 26, 1907
Beaver, Pa.....	6	May 11	May 15, 1908
Philadelphia, Pa. (near).....	9	May 7	May 18, 1907
Morristown, N. J.....	5	May 19	May 24, 1907
New Orleans, La.....			March 23, 1895
Bay St. Louis, Miss.....			March 13, 1902
Gainesville, Tex.....			March 20, 1884
Helena, Ark.....			April 23, 1899
Athens, Tenn.....	7	April 18	May 3, 1904
St. Louis, Mo.....	6	April 25	May 19, 1907
Chicago, Ill.....	10	May 8	May 19, 1907
Oberlin, O.....	7	May 6	June 6, 1908
Keokuk, Ia.....	6	April 30	May 7, 1893
Emporia, Kans.....			May 23, 1885

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Lanesboro, Minn.....	3	October 13	October 6, 1891
Hillsboro, Ia.....	3	September 30	September 8, 1896
Sioux Falls, S. D.....			October 5, 1908
Lawrence, Kans.....			October 21, 1905
San Angelo, Tex.....			October 20, 1886
Chicago, Ill.....	10	August 30	August 16, 1896
Eubank, Ky.....	4	September 13	September 7, 1892
Oberlin, O.....	6	October 14	September 7, 1901
Delight, Ark.....			November 9, 1911
Morristown, N. J.....	6	September 14	August 30, 1910
Philadelphia, Pa. (near).....	9	October 19	September 18, 1890
Beaver, Pa.....			September 10, 1890
Washington, D. C.....	6	October 21	September 7, 1908
French Creek, W. Va.....	4	September 25	September 4, 1892
Raleigh, N. C.....	8	November 4	October 28, 1890
Aiken, S. C.....			November 12, 1887
Chipley, Fla.....			November 21, 1902

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Aweme, Manitoba.....	9	October 6	October 22, 1899
Lanesboro, Minn.....	2	October 25	November 12, 1887
Ottawa, Ont.....	7	November 11	November 24, 1885
Chicago, Ill.....	11	October 31	November 9, 1906
North River, Prince Ed. Island.....			October 6, 1888
Scotch Lake, N. B.....	4	November 30	December 7, 1905
Montreal, Canada.....	4	October 21	November 8, 1908
Hebron, Me.....	4	October 6	October 11, 1908
Hartford, Conn.....	9	October 13	October 29, 1887

Notes on the Plumage of North American Sparrows

TWENTY-FIFTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Redpoll (*Acanthis linaria linaria*, Figs. 1 and 2). In juvenal plumage the young male Redpoll resembles the adult female in general color, but the crown is without red and is streaked like the nape; the throat lacks a black spot and the breast is streaked.

At the post-juvenal (first fall) molt, in which the wing-quills and tail-feathers are retained, the bird acquires its first winter plumage, which is much like that of the female (Fig. 2), but in some cases the breast and sides of the neck are tinged with rosy.

As Dwight has shown, there is no spring molt, and the difference between winter and summer plumage is due to the effects of fading and wear which make the crown-patch seem brighter, the body plumage more sharply streaked and less brownish.

At the post-nuptial (second fall) molt, this plumage, as usual, is completely lost, and the rosy-breasted, adult plumage (Fig. 1) acquired. There is more or less individual variation, which is probably also in part due to age, in the extent of the rosy color of the breast and rump, but this color, once gained, is not lost. As in the immature bird, the differences between winter and summer plumage are occasioned by fading and by wear.

Holboell's Redpoll (*Acanthis linaria holboelli*). This is a more northern species, which rarely reaches the United States. It differs from *A. l. linaria* in being larger, while the Greater Redpoll (*Acanthis linaria rostrata*) of Greenland which visits the United States more frequently, is of approximately the same size as *holboelli*, but is darker. These differences, however, while appreciable in specimens, are too slight to render identification in life certain.

Hoary Redpoll (*Acanthis hornemanni exilipes*, Figs. 3 and 4). The plumage changes in this species appear to be the same as those which take place with *Acanthis linaria*, from which it may be known by its unstreaked rump and other characters.

This species rarely comes so far south as the United States, while the Greenland Redpoll (*Acanthis hornemanni hornemanni*), a larger, whiter species, has been found in the United States but once.

Purple Finch (*Carpodacus purpureus*, Figs. 5 and 6). The nesting or juvenal plumage of the male Purple Finch, both in color and pattern, is much like its succeeding or first winter plumage. At this age the bird resembles the adult breeding female (Fig. 6) but, like winter females, from which it cannot be distinguished, the plumage is tinged with buff. There is no spring molt, and the first breeding plumage is acquired by wear and fading, when the bird resembles the female in summer (Fig. 6).

At the first post-nuptial (second fall) molt, the pink plumage of the adult (Fig. 5) is gained. For the first year of its life, therefore, the male Purple Finch resembles the female in color, but, having once assumed the pink plumage of maturity, it is thereafter retained, and the only further change in color is due to the wearing off of the whitish barbules of the reddish feathers, which, as Dr. Dwight has shown ('Sequence of Molts and Plumages', Ann. N. Y. Acad. Sci., 1900, 173), makes the adult male appear to be brighter in summer than at other times.

The **California Purple Finch** (*Carpodacus purpureus californicus*), of the Pacific Coast Region, closely resembles the eastern bird, but the male is duller and darker, the female more olive-green above. As is well known, caged male Purple Finches lose their pink plumage and become and remain saffron in color, a phenomenon which is generally ascribed to the effects of change of food.

A Coöperative Study of Bird Migration

BIRD-LORE asks the coöperation of its readers in recording the migrations of certain common birds in the belief that a joint study of their movements will add to the interest with which their coming is awaited, and contribute something of value to our knowledge of their travels in particular, and bird migration in general.

By restricting the plan to a small number of common and well-known birds, we largely avoid the danger of misidentification, focus our efforts and thereby increase the value of the records contributed.

It is proposed to take three birds which arrive during the earlier part of the migration season, and three more which are due in the latter part. A summary of observations on the first group will be published in BIRD-LORE for June, while those relating to the second group, the names of which will be announced later, will appear in BIRD-LORE for August.

The first three birds selected are the Redwinged Blackbird, Robin, and Phoebe. A blank form is appended showing how the records should be scheduled before sending them to BIRD-LORE. These records should be mailed to Mr. Charles H. Rogers, care of BIRD-LORE, American Museum of Natural History, New York City, not later than April 10.—F. M. C.

REPORT FROM.....
(Give locality)

MADE BY.....
(Give name and address of observer)

	Date first seen	No. seen	Date next seen	No. seen	Date of becoming common
Red-winged blackbird					
Robin					
Phoebe.....					

Bird-Lore's Fourteenth Christmas Census



PINE GROSBEAK

Photographed by S. S. S. Stansell,
Manly, Alberta

THE returns for the Christmas Census of 1913 have exceeded in number those for any previous year; and, both as a means of saving space and of improving the character of the censuses, it has been deemed advisable to publish only the lists which seem more or less adequately to represent the winter bird-life of the locality to which they relate. Many lists have therefore been rejected under this ruling, while others have been excluded, either because they were received too late for publication or because, in one way or another, they did not conform to the plan of the Census outlined in BIRD-LORE for December. It has, of course, been difficult to know just where to draw the line, and doubtless some lists have been excluded which are quite as worthy of publication as some which have been retained, but, in the absence of time to confer with the author, the editors have been obliged to use their own discretion.

We have again to thank Mr. Charles H. Rogers for preparing the censuses for publication, as well as for the following introductory note.—F. M. C.

INTRODUCTORY NOTE

This winter's extensive southward movement of Acadian Chickadees is the most striking bit of news in the bird world as revealed by the Christmas Census. This species breeds as far south as northernmost or mountainous New England and New York, but wanders ordinarily so little in winter that it very rarely reaches even Massachusetts. This winter, however, it has appeared as far south as southern Rhode Island and Connecticut, and Rhinebeck, New York.

Pine Grosbeaks, Redpolls and the Crossbills have come down in small numbers through New England, but not farther. Pine Siskins came earlier in much greater numbers and considerably farther south. Northern Shrikes are unusually well distributed, although more than one is rarely seen in a day. Robins, Bluebirds and others that are chiefly summer residents in the north and middle East are, for the most part, scarce. This is the first Christmas when

Starlings have been really prevalent in the Philadelphia and Boston regions, and one flock has reached Bennington, Vermont. Santa Barbara, California, with a list of 96 species, takes the lead as in previous years.

This year, it was deemed desirable to exclude a number of the lists submitted usually because—considering the locality—the time spent afield, or the number of birds seen, showed the list to be not at all fairly representative of the Christmas time bird-life of the region.

As usual, some observers paid so little attention to the request as to arrangement that their lists had to be entirely rewritten. In the absence of a specific date it is assumed that the census was made on Christmas Day.—C. H. R.

Yarmouth, Nova Scotia.—Dec. 23; 8 A.M. to 5 P.M. Clear; overcast in late P.M.; ground bare; wind variable, very light; temp. at sunrise, 19°. Old-squaw, 1; Ruffed Grouse, 2; Hairy Woodpecker, 1; Downy Woodpecker, 3; Northern Raven, 4; Crow, 46; Junco, 8; Song Sparrow, 4; Myrtle Warbler, 10; Chickadee, 15; Acadian Chickadee, 4; Golden-crowned Kinglet, 5. Total, 12 species, 103 individuals.—HARRISON F. LEWIS and E. CHESLEY ALLEN.

Arnprior, Ont.—9 A.M. to 4 P.M. Cloudy; ten inches of snow; wind east, light; temp. 27° to 31°. American Goldeneye, 1 (female); Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 1; American Crow, 1; Evening Grosbeaks, heard; Purple Finch, 1; Redpoll, 6; American Goldfinch, 18; Snow Bunting, 20; Brown Creeper, 2; Black-capped Chickadee, 19. Total, 12 species, 72 individuals.—LIGUORI GORMLEY and CHARLES MACNAMARA.

London, Ont. (vicinity of).—Dec. 20; 2.30 to 5.30 P.M. Sky overcast, light rather bad; ground barely covered with snow; wind, light, southwest; temp. 34°. Herring Gull, 1; Scaup, sp. (female), 1; Ruffed Grouse, 1; Cooper's Hawk, 1; Kingfisher, 1; Blue Jay, 1; Crow, 19; Redpoll, 3; Junco, 20; Brown Creeper, 5; White-breasted Nuthatch, 5; Chickadee, 28; Golden-crowned Kinglet, 4. Total, 13 species, 90 individuals. Other species seen recently: Bronzed Grackle, Pine Grosbeak, American Crossbill, Snow Bunting (1,000), Cardinal (pair), Northern Shrike, Robin.—C. G. WATSON, J. A. CAMERON, M. DALE, and J. F. CALVERT.

Millbrook, Ont.—Dec. 25; 9 A.M. to 1.15 P.M. Six inches of snow on ground; wind northeast; temp. 32°. Great Blue Heron, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Chickadee, 6; Robin, 5. Total, 6 species, 17 individuals. A flock of Wild Geese seen flying South ten days ago, many northern lakes being still open.—SAM HUNTER.

Port Dover, Ont.—Dec. 26; 10 A.M. to 12.45 P.M. Cloudy; ground covered with three or four inches of snow; wind north to northeast, fresh; temp. 23°. Downy Woodpecker, 1; American Crow, 7; Bronzed Grackle, 1; Pine Siskin, flock of 125; Junco, 23; Song Sparrow, 1 (heard); Winter Wren, 1; White-breasted Nuthatch, 2; Chickadee, 11; Golden-crowned Kinglet, 2. Total, 10 species, about 174 individuals.—ARTHUR W. PRESTON.

Norway, Maine.—Dec. 25; 8 A.M. to 12 M. Overcast; twelve inches of snow; wind east, light; temp. 32°. Woodpecker, 1 (heard); Blue Jay, 10; Evening Grosbeak, 14 (5 males, 9 females, at South Paris; this flock has been seen several times about the sumacs just preceding the 25th); Pine Grosbeaks, 16; Hoary Redpoll, 2; Redpoll, 100; Greater Redpoll, 1; Goldfinch, 1; Tree Sparrow, 6; Northern Shrike, 1; Red-breasted Nuthatch, 3; Chickadee, 20; Acadian Chickadee, 2. (Have seen this bird only once before this year, and then only one; have seen these two several times this fall and can always distinguish their note from that of the common Chickadee.) Total, 14 species, 277 individuals.—FREELAND HOWE, Jr.

Tilton, N. H.—9.30 A.M. to 1.30 P.M. Cloudy; above five inches of snow on ground; wind, none; temp. 36°. Goldeneye, 15; Canadian Ruffed Grouse, 3; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, heard several; Redpoll, 6; Tree Sparrow, 13; White-breasted Nuthatch 1 (heard); Chickadee, 34; Golden-crowned Kinglet, 1. Total, 10 species, 75 individuals. Crows, Brown Creepers, a Song Sparrow, and an Acadian Chickadee have been present within a few days.—GEORGE L. PLIMPTON, ERNEST R. PERKINS and EDWARD H. PERKINS.

Wilton, N. H.—Dec. 25; 8 A.M. to 11 A.M. Cloudy; ground covered with two inches of snow; no wind; temp. 38°. Ruffed Grouse, 2; Blue Jay, 3; Tree Sparrow, 15; Northern Shrike, 1; White-breasted Nuthatch, 2; Chickadee, 5; Robin, 1. Total, 7 species, 29 individuals.—GEORGE G. BLANCHARD.

Clarendon, Vt.—Dec. 25; 7 A.M. to 1 P.M. Cloudy; eight inches of snow on ground; wind north, light; temp. 35°. Ruffed Grouse, 4; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 1; Pine Grosbeak, 3; Redpoll, 12; Red-breasted Nuthatch, 1; Chickadee, 1. Total, 8 species, 30 individuals. Redpolls, Siskins and Pine Grosbeaks were very numerous up to the middle of December.—L. HENRY POTTER.

Bethel, Vt.—Dec. 22; 9.15 A.M. to 2.15 P.M. Cloudy, but became clear; snow in thin patches; wind north, light; temp. 31° to 33°. Duck, sp. 1; Downy Woodpecker, 1; Redpoll, 1; Chickadee, 18; White-breasted Nuthatch, 1. Total, 5 species, 22 individuals.—ELIZA F. MILLER.

Bennington, Vt.—Dec. 26; 10 A.M. to 12 M. Cloudy, with light flurries of snow; ground covered with from three to ten inches of snow; wind northeast, strong; temp. 36°. Ruffed Grouse, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 4; Crow, 3; Starling, 30; Pine Grosbeak, 1; American Goldfinch, 1; Tree Sparrow, 19; Northern Shrike, 1; White-breasted Nuthatch, 2; Chickadee, 2. Total, 12 species, 68 individuals.—The Starling made its first appearance in Bennington, Dec. 12, 1913, when a flock of about 30 arrived.—DR. and MRS. LUCRETIVS H. ROSS, CHARLES HITCHCOCK and MRS. WM. H. BRADFORD.

Boston, Mass. (Arnold Arboretum, Jamaica Plain, Jamaica Pond, Olmsted and Riverway Parks, and Charles River Basin).—Dec. 22; 8.45 A.M. to 3.45 P.M. Cloudy A.M., clear P.M.; ground bare, wind northeast, light; temp. 42° to 47°. Great Black-backed Gull, 1; Herring Gull, 850; Merganser, 59; Mallard, 4; Black Duck, 413; European Widgeon, 2 drakes; Baldpate, 1; Scaup 2; Lesser Scaup, 77; Goldeneye, 4; Bufflehead, 1; Ruddy Duck, 2; Coot, 8; Ring-necked Pheasant, 15; Hairy Woodpecker, 1; Northern Flicker, 8; Blue Jay, 13; Crow, 34; Goldfinch, 12; Pine Siskin, 57; White-throated Sparrow, 1; Tree Sparrow, 1; Junco, 4; Song Sparrow, 1; Northern Shrike, 1; Brown Creeper, 1; Chickadee, 27; Golden-crowned Kinglet, 7; Robin, 2. Total, 29 species, 1,609 individuals.—HORACE W. WRIGHT and RICHARD M. MARBLE.

Boston to Gloucester, Mass. (by boat).—Dec. 23; 1 to 3.45 P.M. Cloudy; sea rough; wind southeast, strong; temp. 40°. Brünnich's Murre, 3; Dovekie, 7; Kittiwake, 80; Iceland Gull, 1; Great Black-backed Gull, 4; Herring Gull, 1,000; Bonaparte's Gull, 2; Red-breasted Merganser, 8; American Goldeneye, 1. Total, 9 species, 1,106 individuals.—ANNA KINGMAN BARRY, LIDIAN E. BRIDGE and RUTH D. COLE.

Cambridge, Mass. (Fresh Pond and adjoining grounds).—Dec. 25; 9.05 A.M. to 12.05 P.M. Overcast; ground bare; wind northeast; temp. 40°. Black-backed Gull, 3; Herring Gull, 9; American Merganser, 54; Black Duck, 65; Redhead, 2; American Goldeneye, 4; Ring-necked Pheasant, 5; Sparrow Hawk, 1; Hairy Woodpecker, 2; Flicker, 11; Blue Jay, 3; Crow, 8; Starling, 75; Meadowlark, 9; Purple Finch, 4; Goldfinch, 2; Tree Sparrow, 36; Junco, 3; Song Sparrow, 5; Swamp Sparrow, 1; Brown Creeper, 2; Chickadee, 11. Total, 21 species, 315 individuals.—EUGENE E. CADUC and HORACE W. WRIGHT.

Cambridge, Mass. (Waverley, Belmont, Arlington and Fresh Pond).—Dec. 23;

6.50 to 10.20 A.M. Overcast; ground bare; wind southeast, strong; temp. 40° to 30°. **Point of Pines to Nahant, Mass.**—11.40 A.M. to 3.40 P.M. Same conditions. Great Black-backed Gull, 50; Herring Gull, 2,000; Red-breasted Merganser, 10; Black Duck, 80; American Goldeneye, 25; Old-squaw, 5; Ring-necked Pheasant, 3; Hairy Woodpecker, 2; Downy Woodpecker, 1; Northern Flicker, 10; Horned Lark, 30; Blue Jay, 1; Crow, 20; Tree Sparrow, 3; Goldfinch, 2; Northern Shrike, 1; Black-capped Chickadee, 2; Acadian Chickadee, 1; Golden-crowned Kinglet, 9. Total, 19 species, 2,255 individuals.—MYLES P. BAKER and HENRY M. SPELMAN, JR. (Morning trip taken with Howard M. Forbes.)

Cohasset, Mass. (Black Rock Station to Sandy Cove).—Dec. 25; 10 A.M. to 12.15 P.M. Cloudy; ground bare; wind northeast, light; temp. 40°. Loon, 1; Herring Gull, 75; Old-squaw, 1; American Scoter, 7; White-winged Scoter, 5; Brant, 30; Ring-necked Pheasant, 1; Flicker, 5; Crow, 8; Purple Finch, 20; Tree Sparrow, 4; Cedar Waxwing 8; Myrtle Warbler, 6; Brown Creeper, 1; Chickadee, 25. Total, 15 species, 197 individuals.—EDMUND and LIDIAN E. BRIDGE.

Dighton, Mass.—Dec. 25; 8 A.M. to 12 M. Cloudy; ground bare; wind northeast, light; temp. 40°. Black Duck, 2; a V of 17 Canada Geese honking due south; Woodcock, 1; Ruffed Grouse, 2; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 6; Crow, 40; Goldfinch, 25; White-throated Sparrow, 18; Tree Sparrow, 8; Junco, 25; Song Sparrow, 10; Myrtle Warbler, 30; White-breasted Nuthatch, 1; Chickadee, 30; Golden-crowned Kinglet, 4. Total, 17 species, 221 individuals. The Geese were observed at Bourne, Mass., Christmas Eve, by C. L. P.—F. SEYMOUR HERSEY and CHARLES L. PHILLIPS. (We covered nearly the same ground, keeping well together, while making above list.)

East Carver, Mass.—Dec. 25; 7 to 10 A.M. Cloudy; ground bare; wind northwest, medium; temp. 45°. Canada Goose, 52; Bob-white, 6; Ruffed Grouse, 2; Screech Owl, 1; Kingfisher, 1; Downy Woodpecker, 1; Flicker, 2; Blue Jay, 15; Crow, 23; Purple Finch, 1; American Crossbill, 18; American Goldfinch, 12; Tree Sparrow, 5; Junco, 12; Song Sparrow, 1; Fox Sparrow, 1; Myrtle Warbler, 45; Red-breasted Nuthatch, 50; Chickadee, 15; Brown Creeper, 3; Golden-crowned Kinglet, 18; Robin, 5. Total, 22 species, 289 individuals.—LESTER E. PRATT.

Ipswich, Mass. (Castle Hill, beach and dunes).—Dec. 27; 9.45 A.M. to 2.30 P.M. Clear; ground lightly covered with snow; wind northeast, strong; temp. 26°. Horned Grebe, 1; Loon, 1; Dovekie, ?; Kittiwake, 5; Black-backed Gull, 4; Herring Gull, 30; Red-breasted Merganser, 12; Black Duck, 1,000; American Golden-eye, 3; Old-squaw, 2; Canada Goose, 7; Brant, 25; Pheasant, 3; Rough-legged Hawk, 1; Northern Flicker, 3; Horned Lark, 12; American Crow, 100; Meadowlark, 1; American Crossbill, 1; Redpoll, 1; Snow Bunting, 80; Lapland Longspur, 1; Ipswich Sparrow, 3; Tree Sparrow, 24; Junco, 8; Song Sparrow, 1; Northern Shrike, 1; Myrtle Warbler, 24; Chickadee, 18; Acadian Chickadee, 3; Golden-crowned Kinglet, 2. Total, 31 species, 1,369 individuals.—ANNIE W. COBB, ALICE O. JUMP and LIDIAN E. BRIDGE.

Leominster, Mass.—Dec. 25; 7.30 A.M. to 4.30 P.M. Cloudy; ground bare, with patches of snow; no wind; temp. 38°. Herring Gull, 2; Pigeon Hawk, 2; Blue Jay, 2; Crow, 150; Redpoll, 25; Goldfinch, 125; Tree Sparrow, 10; Northern Shrike, 1; White-breasted Nuthatch, 1; Chickadee, 5. Total, 10 species, 323 individuals.—EDWIN RUSSELL DAVIS.

Pittsfield, Mass.—Dec. 20; 10.25 A.M. to 3.30 P.M. Clear; ground partly covered with snow; ponds frozen over; wind southwest, very light; temp. 28°. Black Duck, 16; Downy Woodpecker, 1; Blue Jay, 1; Crow, 2; Starling, 11; White-winged Crossbill, 1; Redpoll, 114; Tree Sparrow, 3; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 14. Total, 11 species, 166 individuals. On Dec. 6 before the ponds froze over I noted Holbøll's Grebe, 2; Merganser, 10; Black Duck, 16; Canvasback, 6; Scaup, 24; Goldeneye, 5; Bufflehead, 1.—BARRON BRAINERD.

Randolph, Mass.—Dec. 23; 9 A.M. to 12.15 P.M. Cloudy; ground bare; wind southeast, light; temp. 40°. Canada Goose (?), 50; Blue Jay, 3; Crow, 7; Pine Grosbeak, 8; Tree Sparrow, 8, Northern Shrike, 1; Chickadee, 10. Two Myrtle Warblers were seen later in the day. Total, 7 species, 87 individuals.—HOWARD K. ROWE.

Sheffield, Mass.—Dec. 26; 10.30 A.M. to 12.30 P.M. Two inches of snow on the ground and snowing steadily all morning; wind northeast shifting to northwest; temp. 32°. Ruffed Grouse, 1; American Crow, 1; Blue Jay, 1; Pine Grosbeak, 25 (1 mature male); Tree Sparrow, 25; Chickadee, 15. Total, 6 species, about 68 individuals.—HAMILTON GIBSON, PAUL VAN DYKE and TERTIUS VAN DYKE.

West Medford, Mass. (through Middlesex Fells to Melrose).—Dec. 21; 8.30 to 11.45 A.M. Clear; ground bare; wind light, southwest; temp. 45°. Herring Gull, 3; American Merganser, 75; Black Duck and Red-legged Black Duck, 500; Ring-necked Pheasant, 2; Sparrow Hawk, 1; Downy Woodpecker, 2; Northern Flicker, 1; Blue Jay, 8; Crow, 15; American Crossbill, 1; Redpoll, 8; Goldfinch, 2; Tree Sparrow, 1; Song Sparrow, 2; Brown Creeper, 2; Red-breasted Nuthatch, 1; Chickadee, 14; Golden-crowned Kinglet, 3. Total, 17 species, 652 individuals.—LIDIAN E. BRIDGE.

Gloicester, R. I.—8 A.M. to 12 M. Cloudy; ground bare; wind north, light; temp. 32°. Flicker, 1; Blue Jay, 1; Crow, 2; Tree Sparrow, 1; Chickadee, 4. Total, 5 species, 9 individuals.—J. IRVING HILL.

Providence, R. I.—Dec. 21; 11 A.M. to 12.30 P.M. Clear; ground bare; temp. 46°. Hairy Woodpecker, 1; Flicker, 1; Blue Jay, 1; White-throated Sparrow, 1; Junco, 1; Song Sparrow, 4; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 6. Total, 10 species, 23 individuals.—EDWARD D. KEITLY.

Warwick, R. I.—Dec. 25; 9.20 A.M. to 1.30 P.M. Cloudy; ground bare; wind light, northeast; temp. 40°. Herring Gull, 19; Scaup, 356; Flicker, 17; Blue Jay, 7; American Crow, 27; Starling, 200; Meadowlark, 9; Purple Finch, 7; Pine Siskin, 31; Tree Sparrow, 107; Song Sparrow, 1; Myrtle Warbler, 295; Chickadee, 48; Acadian Chickadee, 1 (second record for Rhode Island). Total, 14 species, 1,125 individuals.—HARRY S. HATHAWAY.

Woonsocket, R. I.—Dec. 25; 8.30 to 11 A.M. Cloudy; ground bare; wind north to east, very light; temp. 30° to 34°. Blue Jay, 15; Crow, 16; Tree Sparrow, 2; Goldfinch, 5; Chickadee, 7; Golden-crowned Kinglet, 1. Total, 6 species, 46 individuals.—CLARENCE M. ARNOLD.

Bristol, Conn.—Dec. 25; 8 A.M. to 4.10 P.M. Overcast; hazy; later entirely clouded; dark day; rain at 5.30; dead calm; ground bare; temp. 33°; 39° at return. Birds unusually quiet. Black Duck, 35; Canada Goose, 3; Ruffed Grouse, 5; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 45; Crow, 9; Starling, 33; Tree Sparrow, 18; Junco, 2; Song Sparrow, 1; Northern Shrike, 2; Winter Wren, 1; White-breasted Nuthatch, 2; Chickadee, 5. Total, 15 species, 165 individuals.—ROYAL W. FORD and FRANK BRUEN.

Glastonbury, Conn. (Connecticut River and adjacent meadow).—Dec. 25. Cloudy; ground bare; temp. 35° to 45°. Herring Gull, 11; Mallard, 12; Black Duck, 400; Ruffed Grouse, 2; Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Flicker, 2; Blue Jay, 11; Crow, 1,000; Starling, 200; Goldfinch, 1; Tree Sparrow, 20; Song Sparrow, 1; Junco, 1; Northern Shrike, 1; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 12. Total, 19 species, 1,686 individuals.—A. W. SUGDEN and L. W. RIPLEY.

Hartford, Conn.—Dec. 25; 7 to 10 A.M. Cloudy; heavy frost; ground bare; no wind; temp. 29°. Herring Gull, 10; Goldeneye, 1; Sparrow Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 2; Crow, 1,000; Starling, 100; Purple Finch, 5; Goldfinch, 25; Tree Sparrow, 250; Junco, 8; Song Sparrow, 5; Brown Creeper, 5; White-breasted Nuthatch, 4; Chickadee, 25; Golden-crowned Kinglet, 1. Total, 17 species, 1,450 individuals. A pair of Acadian Chickadees and several large flocks of Pine Siskins

had been seen by me only a few days before today, but search for these two species today was fruitless, although they have both been seen frequently for the past month.

—ARTHUR G. POWERS.

Hartford, Conn.—Dec. 25; 10 A.M. to 12 M. Cloudy; ground bare; no wind; temp. 32°. Downy Woodpecker, 2; Blue Jay, 6; Crow, 8; Starling, 82; Redpoll, 6; Goldfinch, 21; Tree Sparrow, 51; Junco, 38; Northern Shrike, 2; White-breasted Nuthatch, 3; Chickadee, 22. Total, 11 species, 241 individuals.—CLIFFORD M. CASE.

Hartford, Conn. (Keney and Elizabeth Parks).—Dec. 25; 9.30 A.M. to 2 P.M. Cloudy; raw; temp. 35°. Ring-necked Pheasant, 1 female; Downy Woodpecker, 2; Blue Jay, 12; Crow, 4; Meadowlark, 2; Pine Siskin, 150; Junco, 50; Brown Creeper, 1; White-breasted Nuthatch, 8; Black-capped Chickadee, 10. Total, 10 species, 240 individuals.—HARRY D. HITCHCOCK.

West Hartford, Conn.—Dec. 25; 9.15 A.M. to 12.15 P.M. and 2 P.M. to 4 P.M. Very cloudy; ground bare; wind light, southeast; temp. 32° to 36°. Marsh Hawk, 1 female; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Crow, 3,000; Starling, 1,000; Tree Sparrow, 100; Northern Shrike, 1; White-breasted Nuthatch, 5; Chickadee, 6; Bluebird, 1. Total, 11 species, 4,119 individuals.—EDWIN H., MYRON T. and PAUL H. MUNGER.

New Haven, Conn. (Edgewood Park).—Dec. 25; 10 A.M. to 1 P.M. Sun behind thin clouds; ground bare; wind light, east; temp. 36°. Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Crow, 7; Starling, 7; Tree Sparrow, 82; Junco, 25; Song Sparrow, 8; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 31; Golden-crowned Kinglet, 2. Total, 13 species, 170 individuals.—CLIFFORD H. and DWIGHT B. PANGBURN.

New London, Conn.—Dec. 27; 10.30 A.M. to 12.30 P.M. and 2 to 4.30 P.M. Clear; ground bare; wind northwest, strong, diminishing; temp. 26°. Herring Gull, 67; Screech Owl, 1; Crow, 16; Starling, 6; Meadowlark, 16; Purple Finch, 3; Goldfinch, 1; Tree Sparrow, 4; Junco, 14; Myrtle Warbler, 16; Chickadee, 5; Bluebird, 3. Total, 12 species, 152 individuals.—FRANCES M. GRAVES.

South Windsor, Conn.—Dec. 26; 9 A.M. to 1 P.M. Snow and sleet; temp. 34°. Herring Gull, 4; American Merganser, 1; Ring-necked Pheasant, 1; Red-shouldered Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Flicker, 1; Horned Lark, 25; Blue Jay, 1; Crow, 12; Starling, 3; Meadowlark, 2; Tree Sparrow, 75; Junco, 5; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 10. Total, 18 species, 204 individuals.—C. W. VIBERT.

Stratford Point, Conn.—Dec. 28; 10 A.M. to 3.30 P.M. 10 miles. Fair; no snow; temp. 20° at 8 A.M. Horned Grebe, 3; Herring Gull, 77; Black Duck, 7; Lesser Scaup, 200; Goldeneye, 11; Old-squaw, 6; White-winged Scoter, 90; Marsh Hawk, 2; Goshawk (?), 1; Red-shouldered Hawk, 1; Sparrow Hawk, 2; Short-eared Owl, 3; Red-headed Woodpecker, 1; Horned Lark, 50; American Crow, 172; Starling, 222; Cowbird, 1 (positive); Meadowlark, 40; Purple Grackle, 1; Red-winged Blackbird, 36; Tree Sparrow, 202; Song Sparrow, 30; Fox Sparrow, 1; American Pipit or Lapland Longspur, 15; Chickadee, 7; raft of ducks in Sound, species undetermined, probably Scaup, 1,000 (estimate low). Total, 25 species, 2,198 individuals.—WILBUR F. SMITH, JAMES F. HALL and GEORGE P. ELLS.

Unionville, Conn.—Dec. 24; 12 M. to 6 P.M. Clear; ground bare; wind west, light; temp. 60°. Black Duck, 1; Ruffed Grouse, 1; Hairy Woodpecker, 4; Downy Woodpecker, 2; Blue Jay, 2; American Crow, 9; Redpoll, 6; Goldfinch, 8; Tree Sparrow, 3; White-breasted Nuthatch, 8; Chickadee, 12. Total, 11 species, 57 individuals.—ANTOINETTE S. CRESSY.

West Hartford, Conn.—Dec. 25; 7.15 to 11.15 A.M. Cloudy; ground bare; temp. 30° to 43°. Downy Woodpecker, 4; Starling, 47; Crow, 447; Blue Jay, 4; Tree

Sparrow, 15; White-breasted Nuthatch, 2; Chickadee, 21. Total, 7 species, 540 individuals.—MR. and MRS. H. P. MEECH.

Amityville, L. I. (Jones Beach and Great South Bay).—Dec. 28; 7 A.M. until dark. Clear, becoming slightly overcast after 11 A.M.; ground, marshes and creeks mostly frozen; wind light, northwest; temp. 21° to 34°. Holboell's Grebe, 3; Horned Grebe, 19; Loon, 27; Red-throated Loon, 1; Great Black-backed Gull, 5; Herring Gull, 2,000; Red-breasted Merganser, 46; Black Duck, 148; Scaup, 21; Goldeneye, 7; Old-squaw, 42; American Scoter, 21; White-winged Scoter, 500 (estimated); Canada Goose, 183; Brant, 636; Wilson's Snipe, 1; Marsh Hawk, 3; Rough-legged Hawk, 1; Short-eared Owl, 3; Horned Lark, 68; Crow, 50; Starling, 10; Meadowlark, 23; Snow Bunting 47; Ipswich Sparrow, 9; Savannah Sparrow, 3; White-throated Sparrow, 4; Tree Sparrow, 38; Song Sparrow, 20; Swamp Sparrow, 7; Fox Sparrow, 4; Northern Shrike, 1; Myrtle Warbler, 176; Winter Wren, 1; Short-billed Marsh Wren, 1 (a genuine surprise; seemed stupefied with the cold, though able to fly well; as this is the third record for Long Island, and the first winter record for New York State, the bird was collected); Chickadee, 10. Total, 36 species, 4,135 individuals. Waterfowl abundant as result of the northwest gale on Dec. 26. Brant in much greater numbers yesterday. Seen yesterday, Kittiwake, 5; Surf Scoter, 1; Long-eared Owl, 1.—NICHOLAS F. LENSSEN, GEORGE W. HUBBELL, JR., and LUDLOW GRISCOM (all keeping together).

Collins, N. Y. (hospital grounds and Cattaraugus Indian Reservation).—Dec. 25; 9 to 10 A.M. and 12.30 to 1 and 3 to 3.50 P.M. Overcast; ground bare, unfrozen; no wind; temp. 35°. Downy Woodpecker, 3; Prairie Horned Lark, 25; Blue Jay, 2; Crow, 3; Tree Sparrow, 15; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 24. Total, 8 species, 77 individuals.—ANNE E. PERKINS, M.D., and CLARA B. NEWCOMB.

Far Rockaway, L. I., N. Y.—Dec. 26; 9 A.M. to 2.30 P.M. Cloudy, with occasional rain; ground bare; wind east, brisk; temp. 44°. Horned Grebe, 4; Loon, 1; Black-backed Gull, 4; Herring Gull, 550; (outer bar shore line covered with many thousands of Gulls, several species unidentified); Scaup, 51; Old-squaw, 34; Canada Goose, 15; Brant, 6; Black-crowned Night Heron, 8; Marsh Hawk, 1; Red-shouldered Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Crow, 25; Starling, 350; Meadowlark, 18 (singing); Tree Sparrow, 28; Junco, 11; Song Sparrow, 2; Chickadee, 5; Robin, 2.—Total, 22 species, 1,124 individuals.—CHARLOTTE BOGARDUS.

Floral Park, L. I., N. Y.—Dec. 25; 9 to 12 A.M. Cloudy; wind northeast, brisk; temp. 40° to 58°. Herring Gull, 10; Sharp-shinned Hawk, 2; Cooper's Hawk, 1; *Accipiter*, sp., 1; Screech Owl, 1; Horned Lark, 1; Crow, 500; Fish Crow, 8; Starling, 300; Tree Sparrow, 10. Total, 9 species, 864 individuals.—HENRY THURSTON and FRED ZOELLER.

Geneva, N. Y.—Dec. 21; 9 A.M. to 4 P.M. Cloudy; ground bare; wind west, light; temp. 35° to 40°. Horned Grebe, 13; Loon, 1; Herring Gull, 5; Ring-billed Gull, 8; Black Duck, 1; Canvasback, 30; Goldeneye, 55; Bufflehead, 17; Old-squaw, 16; Ring-necked Pheasant, 3; Short-eared Owl, 1; Screech Owl, 1; Downy Woodpecker, 4; Crow, 100; Tree Sparrow, 10; Song Sparrow, 1; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 11; Chickadee, 18; Golden-crowned Kinglet, 1. Total, 21 species, 300 individuals.—OTTO MCCREARY.

Hamburg, N. Y.—Dec. 22; 1.30 to 4.30 P.M. Cloudy; ground bare; wind southwest, light; temp. 34°. Screech Owl, 1; Downy Woodpecker, 1; Crow, 4; Northern Shrike, 1; White-breasted Nuthatch, 1; Chickadee, 10. Total, 6 species, 18 individuals. Flushed 3 Ruffed Grouse on Dec. 20.—THOMAS L. BOURNE and HEATH VAN DUZEE.

New York City (Pelham Bay Park and vicinity).—Dec. 24; 8.10 A.M. to 1.40 P.M. Clear; ground bare; wind light, northwest; temp. 38°. Herring Gull, 450; Scaup, 3; Goldeneye, 16; Red-shouldered Hawk, 1; Downy Woodpecker, 9; Flicker, 2; Crow, 75; Blue Jay, 7; Starling, 50; Meadowlark, 6; Goldfinch, 18; Pine Siskin, 90; Tree Sparrow, 53; Junco, 45; Song Sparrow, 6; White-breasted Nuthatch, 3; Chickadee, 47; Bluebird, 1.

Total, 18 species, 882 individuals. On Dec. 23, 3 Night Herons and a Kingfisher, and on Dec. 21, 15 Bob-whites were seen on this area.—ARETAS A. SAUNDERS.

New York City (western half of Van Cortlandt Park).—Dec. 20; 8.30 A.M. to 4.45 P.M. Partly cloudy; ground bare; no wind; heavy frost at start; temp. 54° at 2 P.M. Bob-white, covey of at least 7; Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1 (male); Blue Jay, 3; American Crow, 13; Starling, 105; Red-winged Blackbird, 5; Pine Siskin, flock of 14; Tree Sparrow, 80; Field Sparrow, 6; Junco, flock of 26; Song Sparrow, 6; Swamp Sparrow, 1; Brown Thrasher, 1 (same spot as Nov. 30; in dense cover; lively but will not fly); Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 5; Black-capped Chickadee, 11. Total, 19 species, about 290 individuals.—CHARLES H. ROGERS.

New York City (Westchester Ave., Watson's Woods, Bronx Park to Van Cortlandt Park).—Dec. 25; 11.30 A.M. to dark. Overcast and threatening, hail after 4 P.M. Ground free from frost; wind northeast, fairly strong; temp. 45° to 38°. Herring Gull, 109; Black-crowned Night Heron, 25; Sparrow Hawk, 1, Barred Owl, 1; Downy Woodpecker, 2; Crow, 14; Starling, 71; Goldfinch, 5; White-throated Sparrow, 17; Tree Sparrow, 10; Field Sparrow, 7; Junco, 19; Song Sparrow, 6; Swamp Sparrow, 2; Fox Sparrow, 41 (all in one flock—a phenomenal number so late); Towhee, 1 (female); Brown Creeper, 5; White-breasted Nuthatch, 3; Chickadee, 22. Total, 19 species, 361 individuals.—GEORGE W. HUBBELL, JR., and LUDLOW GRISCOM.

New York City (West Farms to Clason Point).—Dec. 27; 2.15 to 4.45 P.M. Clear; ground bare, very wet in places from recent rain; wind northwest, brisk; temp. 31°. Herring Gull, 1,000 or more; Bonaparte's Gull, 50; Red-breasted Merganser, 1 (drake); Black Duck, 20; Scaup, 200; a flock of at least 500 ducks riding upon the water, too far out to identify; Red-tailed Hawk, 4; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 1; Flicker, 1; Crow, 1; Starling, 17; White-throated Sparrow, 10; Tree Sparrow, 20; Song Sparrow, 2; Fox Sparrow, 30; Winter Wren, 1; White-breasted Nuthatch, 3; Chickadee, 2. Total, 19 species, about 2,000 individuals.—EDWIN DESVERNE and GEORGE E. HIX.

New York City (Central Park).—Dec. 25; 9.30 to 10.30 A.M. Cloudy; ground bare; light wind; temp. 28°. Herring Gull, 9; Starling, 4; Grackle (*Q. quiscula* subsp.), 2; Rusty Blackbird, 1; White-throated Sparrow, 3 (males); White-breasted Nuthatch, 1; Chickadee, 4. Total, 8 species, 24 individuals.—JOHN DRYDEN KUSER.

New York City (Central Park).—Dec. 25; 7.15 A.M. to 1.30 P.M. Cloudy; ground bare; wind northeast, brisk; temp. about 40°. Herring Gull, 110; Downy Woodpecker, 3; Starling, 70; Grackle (*Q. quiscula*, subsp.), 6; White-breasted Nuthatch, 1; Chickadee, 9; Robin, 1. Total, 7 species, 200 individuals.—J. C. WILEY and MR. and MRS. G. CLYDE FISHER.

New York City (Prospect Park, Brooklyn).—Dec. 21; 8.30 to 10.30 A.M. Clear; ground bare; wind southwest, light; temp. 45°. Herring Gull, 2; Black Duck, 8; Screech Owl, 1; Downy Woodpecker, 3; Starling, 30; Pine Siskin, 3; White-throated Sparrow, 3; Junco, 2; Song Sparrow, 2; Northern Shrike, 1; Carolina Wren, 1; White-breasted Nuthatch, 1; Chickadee, 4. Total, 13 species, 61 individuals.—K. P. and E. W. VIETOR.

New York City (Flushing, L. I.).—Dec. 27; six hours. Clear and cold; temp. about 30°. Herring Gull, 9; Wilson's Snipe, 1; Red-tailed Hawk, 3; Rough-legged Hawk, 4; Crow, 16; Starling, 50; Meadowlark, 15; White-throated Sparrow, 6; Tree Sparrow, 13; Junco, 12; Song Sparrow, 6; Swamp Sparrow, 10; Towhee, 1; Long-billed Marsh Wren, 1; Chickadee, 5. Total, 15 species, 153 individuals.—HOWARTH S. BOYLE.

New York City (Princes Bay to New Dorp, Staten Island).—Dec. 28; 8 A.M. to 5 P.M. Hazy to cloudy, clearing in late P.M.; ground bare and frozen; wind light northwest; temp. 20° at start, rising several degrees during day. Great Black-backed Gull, 1; Herring Gull, 431; Bonaparte's Gull, 5; Greater Scaup, 1; Goldeneye, 18; Bufflehead, 2;

Old-squaw, 10; Marsh Hawk, 3; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Barn Owl, 1; Long-eared Owl, 3; Barred Owl, 1; Saw-whet Owl, 2; Downy Woodpecker, 2; Blue Jay, 8; Crow, 45; Starling, 377; Meadowlark, 7; Ipswich Sparrow, 2; Tree Sparrow, 34; Junco, 27; Song Sparrow, 4; Cardinal, 3; Myrtle Warbler, 8; White-breasted Nuthatch, 3; Tufted Titmouse, 3; Chickadee, 3; Robin, 1. Total, 30 species, 1,008 individuals.—C. R. TUCKER and HOWARD H. CLEAVES.

New York City (Princes Bay to Tottenville to Great Kills, Staten Island).—Dec. 21; 8.15 A.M. to 4.15 P.M. Slightly hazy; ground bare; wind very light, southwest; temp. 30° at start, rising. Herring Gull, 46; Greater Scaup, 5; Bufflehead, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 5; Long-eared Owl, 1; Barred Owl, 1; Screech Owl, 1; Kingfisher, 1; Downy Woodpecker, 6; Blue Jay, 10; Crow, 34; Starling, 224; Meadowlark, 21; Goldfinch, 2; Pine Siskin, 56; Tree Sparrow, 22; Field Sparrow, 7; Junco, 5; Song Sparrow, 13; Cardinal, 2; Carolina Wren, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 5; Chickadee, 10; Robin, 3. Total, 26 species, 485 individuals.—HOWARD H. CLEAVES.

Battery, New York City, to and at the Cholera Bank (about 10 miles off Long Beach, L. I.) and back.—Dec. 19; 8.25 A.M. to 4.25 P.M. Clear; light southerly wind; temp. 45° at Bank at 1.30 P.M. Loon, sp., 3; Kittiwake, 40; Black-backed Gull, 4 (adults); Herring Gull, 1,500; Bonaparte's Gull, 300; Old-squaw, 5; White-winged Scoter, flock of 23. Total, 7 species, about 1,875 individuals.—W. H. WIEGMANN, W. DE W. MILLER, J. T. NICHOLS and C. H. ROGERS.

Orient, L. I., N. Y.—Dec. 22; all day. Clear; ground bare and free from frost with exception of a slight white frost in A.M.; wind calm; temp. 29° to 45°. Horned Grebe, 25; Loon, 30; Black-backed Gull, 1; Herring Gull, 250; Cormorant (*P. carbo*) 1; Red-breasted Merganser, 30; Black Duck, 8; Greater Scaup, 1,000; Goldeneye, 60; Bufflehead, 325; Old-squaw, 600; White-winged Scoter, 400; Surf Scoter, 550; Canada Goose, 17; Bobwhite, 8; Pheasant, 2; Marsh Hawk, 1; Rough-legged Hawk, 1; Screech Owl, 3; Kingfisher, 1; Downy Woodpecker, 4; Flicker, 35; Horned Lark, 170; Crow, 300; Fish Crow, 4; Red-winged Blackbird, 1; Meadowlark, 100; Purple Grackle, 2; Red Crossbill, 2; Goldfinch, 2; Siskin, 25; White-throated Sparrow, 1; Tree Sparrow, 45; Junco, 4; Song Sparrow, 40; Swamp Sparrow, 3; Northern Shrike, 1; Myrtle Warbler, 300; Catbird, 1; Winter Wren, 2; Chickadee, 40; Golden-crowned Kinglet, 10; Hermit Thrush, 1; Robin, 10. Total, 44 species, 4,155 individuals. Each party covering different ground. ROY and FRANK G. LATHAM.

Port Chester, N. Y.—9 A.M. to 4.30 P.M. Clear; ground bare; wind north, high; temp. 20°. Horned Grebe, 2; Loon, 1; Herring Gull, 150; Red-breasted Merganser, 2; American Goldeneye, 1; Old-squaw, 20; White-winged Scoter, 50; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Long-eared Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Horned Lark, 30; Blue Jay, 5; Crow, 20; Starling, 150; Meadowlark, 20; Purple Finch, 20; Goldfinch, 20; Snow Bunting, 20; White-throated Sparrow, 3; Tree Sparrow, 20; Junco, 4; Song Sparrow, 20; Brown Creeper, 6; White-breasted Nuthatch, 8; Black-capped Chickadee, 35; Golden-crowned Kinglet, 4; Bluebird, 1. Total, 30 species, 488 individuals.—RICHARD L. BURDSALL, SAMUEL N. COMLY, JAMES C. MAPLES, PAUL CECIL SPOFFORD, BOLTON COOK and E. MORRIS BURDSALL.

Rhinebeck, N. Y.—9 A.M. to 1 P.M.; 2 to 3 P.M.; area covered, 1,200 acres. Cloudy; ground bare; wind south, light; temp. 33°. Herring Gull, 2; English Pheasant, 9; Red-tailed Hawk, 2; Sparrow Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 12; Blue Jay, 2; Crow, 10; Redpoll, 26; White-throated Sparrow, 1; Tree Sparrow, 17; Junco, 15; Song Sparrow, 3; Brown Creeper, 2; White-breasted Nuthatch, 12; Chickadee, 38; Acadian Chickadee, 2; Golden-crowned Kinglet, 3; Bluebird, 9. Total, 20 species, 173 individuals.—DR. and MRS. J. F. GOODELL and MAUNSELL S. CROSBY.

Rochester, N. Y. (Highland Park).—Dec. 25; 8 A.M. to 12 M. Cloudy, threatening rain; ground bare; no wind; temp. 32° to 40°. Herring Gull, 1; Screech Owl, 1; Downy Woodpecker, 1; Blue Jay, 1; American Crow, 4; Cardinal, 1; White-breasted Nuthatch, 2; Chickadee, 12. Total, 8 species, 23 individuals.—RICHARD E. HORSEY.

Rochester, N. Y. (Highland Park).—Dec. 29; 8 A.M. to 5 P.M. Light snow on ground; wind southwest; temp. 22° upwards. Pheasant, 1; Downy Woodpecker, 1; Blue Jay, 1; Crow, 8; Junco, 1; Cardinal 1; White-breasted Nuthatch, 1; Chickadee, 12. Total, 8 species, 26 individuals.—WM. L. G. EDSON.

Rochester, N. Y. (Highland Park and Mt. Hope).—Dec. 25; 9.30 A.M. to 12 M. Cloudy, with mist; ground bare; wind southwest, slight; temp. 35°. Downy Woodpecker, 1; Flicker, 1; Blue Jay, 1; Crow, 6; White-breasted Nuthatch, 6; Chickadee, 5. Total, 6 species, 20 individuals.—NETTIE SELLINGER PIERCE.

St. James, L. I., N. Y.—Dec. 21; 12.30 A.M. to 3.30 P.M. Cloudy, foggy, sun showing at intervals; ground bare; wind very light; temp. 56°. Horned Grebe, 15; Herring Gull, 125; Greater Scaup, 20; American Goldeneye, 1; Old-squaw, 10; White-winged Scoter, 85; Sparrow Hawk, 1; Crow, 12; Junco, 25. Total, 9 species, 294 individuals.—JAMES W. LANE, JR.

Syracuse, N. Y.—9.30 A.M. to 1 P.M. and 3 to 4 P.M. Cloudy; ground covered with thin coating of sleet; no wind; temp. 38°. Loon, 2; Herring Gull, 13; Screech Owl, 1; Downy Woodpecker, 3; Crow, 4; Tree Sparrow, 12; White-breasted Nuthatch, 3; Chickadee, 9. Total, 8 species, 47 individuals.—MARY E. WHITFORD and NETTIE M. SADLER.

Woodmere, N. Y.—Dec. 27; 10.10 A.M. to 1 P.M. Seven-mile walk, covering woods, fields and marshes. Clear; ground bare; wind strong, cold, northwest; temp. 27½°. Marsh Hawk, 1; Downy Woodpecker, 1; Blue Jay, 2; Crow, 24; Starling, 3; Meadowlark, 1; Tree Sparrow, 4; Junco, 7; Song Sparrow, 3; Myrtle Warbler, 5; Black-capped Chickadee, 1; Robin, 1. Total, 12 species, 53 individuals. Dec. 29, Cedar Waxwing and American Pipit.—CHARLES A. HEWLETT.

Camden, N. J.—Dec. 25; 10 A.M. to 3.30 P.M. Cloudy; starting to rain 1.30 P.M. wind northeast; temp. 38°. Herring Gull, 5; Black Duck, 1; Mourning Dove, 15 (flock); Cooper's Hawk, 1; Red-tailed Hawk, 8; Sparrow Hawk, 7; Downy Woodpecker, 2; Flicker, 4; Crow, 81; Starling, 18; White-throated Sparrow, 12; Tree Sparrow, 23; Field Sparrow, 2; Junco, 49; Song Sparrow, 16; Swamp Sparrow, 2; Fox Sparrow, 3; Towhee, 1; Cardinal 7; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 2; Chickadee, 10. Total, 24 species, 273 individuals.—JULIAN K. POTTER and DELOS E. CULVER.

Clinton, Horse Neck and Lower Montville, N. J.—Dec. 25; 9 A.M. to 3 P.M. Cloudy; ground bare; wind northeast, light; temp. 40°. Red-shouldered Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 10; Red-headed Woodpecker, 1; Blue Jay, 8; Crow, 88; Starling, 58; Goldfinch, 12; Pine Siskin, 1; White-throated Sparrow, 1; Tree Sparrow, 96; Junco, 31; Song Sparrow, 2; Northern Shrike, 1; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 8; Bluebird, 9. Total, 21 species, 336 individuals.—LOUIS S. KOHLER.

Englewood, N. J. (Leonia, Overpeck Creek, Teaneck, Phelps Estate, Palisades, Interstate Park to Alpine and Cresskill).—Dec. 21; dawn until dark. Fair; becoming partly overcast after 11 A.M.; ground bare, free from frost except in early morning; wind west, very light; temp. 30° to 45°. Herring Gull, 35; Black Duck, 1; Marsh Hawk, 2; Red-tailed Hawk, 4; Rough-legged Hawk, 1; Duck Hawk, 1 (Palisades); Barred Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 12; Flicker, 2; Blue Jay, 11; Crow, 21; Starling, 90; Meadowlark, 15; Goldfinch, 5; European Goldfinch, 8; Pine Siskin (?), 2; White-throated Sparrow, 14; Tree Sparrow, 70; Field Sparrow, 3; Junco, 55; Song Sparrow, 17; Swamp Sparrow, 5; Cardinal, 2; Carolina Wren, 7; Winter Wren, 1;

White-breasted Nuthatch, 3; Chickadee, 35; Golden-crowned Kinglet, 10; Bluebird, 4 (only the second time we have seen it in winter). Total, 29 species, 430 individuals.—JOHN TREADWELL NICHOLS, S. V. LADOW and LUDLOW GRISCOM.

Hackettstown, N. J.—Dec. 18; 9 to 11.40 A.M. Partly cloudy; ground bare; temp, 31°. Great Blue Heron (?), 1; Downy Woodpecker, 1; Crow, 3; Starling, 1; Purple Finch 2; Goldfinch, 2; White-throated Sparrow, 1; Tree Sparrow, 5; Junco, 2; Song Sparrow, 3; White-breasted Nuthatch, 2; Chickadee, 3. Total, 12 species, 26 individuals.—MARY PIERSON ALLEN.

Moorestown, N. J.—Dec. 25; 6.53 A.M. to 3.50 P.M. Some of the party not in field so long. Clear to cloudy; rain in afternoon; ground bare; wind northeast, light, becoming fresh; temp. at start, 35°. Herring Gull, 5; Ruddy (?) Duck, 1; Great Blue Heron, 2; Killdeer, 19; Mourning Dove, 17; Turkey Vulture, 2; Marsh Hawk, 2; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Red-tailed Hawk, 12; Red-shouldered Hawk, 6; Sparrow Hawk, 5; Barn Owl (recently killed; leg broken as by a trap), 1; Long-eared Owl, 1; Belted Kingfisher, 1; Hairy Woodpecker, 5; Downy Woodpecker, 20; Flicker, 6; Horned Lark, 5; Blue Jay, 24; Crow, 762; Starling, 183; Meadowlark, 116; Purple Grackle, 1; Goldfinch, 11; White-throated Sparrow, 41; Tree Sparrow, 230; Chipping Sparrow, 1; Junco, 674; Song Sparrow, 92; Fox Sparrow, 2; Cardinal, 45; Northern (?) Shrike, 2; Carolina Wren, 3; Winter Wren, 11; Brown Creeper, 8; White-breasted Nuthatch, 11; Tufted Titmouse, 9; Chickadee, 64; Golden-crowned Kinglet, 4; Robin, 4; Bluebird, 3. Total, 42 species, 2,414 individuals. Observers worked in four parties covering for the most part different ground. One Pine Siskin seen on Dec. 24.—JOHN D. CARTER, ARTHUR S. MARIS, E. LESLIE NICHOLSON, J. HOWARD MICKLE, ANNA A. MICKLE, WILLIAM B. EVANS and GEORGE H. HALLETT, JR.

Morristown, N. J.—Dec. 25; 9.30 A.M. to 12.30 P.M. Cloudy; ground bare; wind east, moderate; temp. 39°. Blue Jay, 7; Crow, 5; Starling, 10; Goldfinch, 1; Tree Sparrow, 23; Field Sparrow, 1; Song Sparrow, 23; Junco, 25; White-breasted Nuthatch, 4; Tufted Titmouse, 1; Chickadee, 24. Total, 11 species, 124 individuals.—R. C. CASKEY.

Mountain View, N. J.—Dec. 21; 10 A.M. to 3 P.M. Fair; ground bare; no wind; temp. 45°. Black Duck, 4; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 10; Blue Jay, 25; Crow, 25; Starling, 20; Goldfinch, 3; Tree Sparrow, 100; Junco, 100; Song Sparrow, 2; Fox Sparrow, 2; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 25; Tufted Titmouse, 25; Chickadee, 10. Total, 19 species, 357 individuals.—HERBERT COTTRELL.

Newfield, N. J.—Dec. 25; 10 A.M. to 3.10 P.M. Cloudy in forenoon, rain in afternoon; wind northeast, brisk; temp. 43°. Bob-white, 6; Blue Jay, 3; Crow, 3; Meadowlark, 3; Tree Sparrow, 40; Song Sparrow, 1; Junco, 75; Cardinal, 1; Chickadee, 5. Total, 9 species, 137 individuals. On Dec. 24, 1 Goldfinch, and flock of several hundred Red-winged Blackbirds were seen.—WM. W. FAIR.

Plainfield, N. J. (to Ash Swamp).—Dec. 25; 7.10 A.M. to 6 P.M. Cloudy, raining from 2.30 P.M.; ground bare (has not been snow-covered this season); wind east; temp. 41°. Canada Goose, 11 (flock, flying south); Marsh Hawk, 1; Red-tailed Hawk, 1; Hawk (*Buteo* sp.) 2; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Blue Jay, 12; Common Crow, 160; Fish Crow, 3; Starling, about 660 (one flock of fully 600); Meadowlark, 18 (flock, at roost); Rusty Blackbird, 14 (flock); Pine Siskin, 6 (flock); White-throated Sparrow, 4 (flock); Tree Sparrow, 45; Field Sparrow, 2 (together); Junco, 25; Song Sparrow, 4; Swamp Sparrow, 2 (together); Cardinal, 3; Northern Shrike, 1; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 6; Tufted Titmouse, 8; Black-capped Chickadee, 23; Hermit Thrush, 2 (together). Total, 27 species, about 1,025 individuals.—W. DEW. MILLER.

Trenton, N. J. (and vicinity).—Dec. 25; 9.30 A.M. to 2 P.M. Clear; ground bare; wind light, west; temp. 40°. Downy Woodpecker, 3; Junco, 50; Song Sparrow, 15;

Cardinal, 3; Myrtle Warbler, 6; Brown Creeper, 5; White-breasted Nuthatch, 2; Chickadee, 20; Bluebird, 4. Total, 9 species, 108 individuals.—WILLIAM M. PALMER.

Trenton, N. J. (Pennsylvania side of river bank).—10 A.M. to 12.30 P.M. Cloudy; ground bare; wind fresh, northeast; temp. 44°. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Crow, 9; White-throated Sparrow, 8; Tree Sparrow, 35; Junco, 95; Song Sparrow, 20; Cardinal, 9; Carolina Wren, 1; Brown Creeper, 4; White-breasted Nuthatch, 4; Tufted Titmouse, 1; Chickadee, 18. Total, 14 species, 211 individuals.—W. L. DIX.

Cochranville, Pa.—Dec. 28; 1.30 to 4 P.M. Partly cloudy; ground bare; light northwest wind; temp. 31°. Turkey Vulture, 1; Downy Woodpecker, 1; Crow, 20; Vesper Sparrow, 1; Tree Sparrow, 11; Junco, 15; Chickadee, 3. Total, 7 species, 52 individuals. Two Cardinals (a pair) and a Marsh Hawk were seen Dec. 24.—ANNA COATES.

Delaware Co., Pa. (Clifton Heights to West Chester Pike on Darby Creek and return).—Dec. 24; 7 A.M. to 2 P.M.; distance about 11 miles. Clear until noon, then becoming overcast; ground bare; very light, northwest wind; temp. at start, 37°, at finish, 46°. Cooper's Hawk, 1; Red-tailed Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 1; Flicker, 1; Crow, 45; Starling, 7; Goldfinch, 3; Savannah Sparrow, 5; Tree Sparrow, 4; Field Sparrow, 4; Junco, 225; Song Sparrow, 13; Cardinal, 5; Carolina Wren, 2; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 7; Tufted Titmouse, 4; Chickadee, 11; Bluebird, 3. Total, 21 species, about 347 individuals.—DELOS E. CULVER.

Doylestown, Bucks Co., Pa.—Dec. 24; 7 A.M. to 4 P.M. Partly cloudy; ground bare; east wind; temp. 40°. Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 2; Crow, 250; Starling, 1; Purple Grackle, flock of 200 to 300; Goldfinch, 3; White-throated Sparrow, 2; Tree Sparrow, 1; Junco, 15; Song Sparrow, 1; Cardinal, 1; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 4; Golden-crowned Kinglet, 2. Total, 16 species, 543 individuals. I consider this record unique, as the observations were made entirely from the windows of my home on one of the principal streets of the town.—M. E. (MRS. WM.) MASON.

Forest Grove, Pa.—9 A.M. to 12 M. Clear; ground bare; wind northwest; temp. 60°. Great Horned Owl, 1; Downy Woodpecker, 1; Crow, several hundred; Starling, 200; Field [Tree?] Sparrow, 25; Song Sparrow, 3; Cardinal, 1; Cedar Waxwing, 4; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Chickadee, 10; Robin, 1; Bluebird, 4. Total, 13 species, 454 individuals.—ANNA BEWLEY.

Lititz, Pa. (northern Lancaster Co., valley of Hammer Creek).—8.45 A.M. to 4 P.M. Cloudy, occasional snow; ground covered; high northwest wind; temp. 34°. Bobwhite, 17 (2 coveys); Turkey Vulture, 6; Red-tailed Hawk, 1; Sparrow Hawk, 5; Screech Owl, 1; Downy Woodpecker, 6; Flicker, 1; Horned Lark, 70; Blue Jay, 7; Crow, 1,500; Meadowlark, 3; American Goldfinch, 6; Tree Sparrow, 115; Junco, 145; Song Sparrow, 2; Winter Wren, 3; White-breasted Nuthatch, 26; Black-capped Chickadee, 24. Total, 18 species, about 1,950 individuals.—HERBERT H. BECK and ELMER E. KAUTZ.

McKeesport, Pa.—Dec. 21; 9 A.M. to 4 P.M. Misty rain, A.M., and cloudy, P.M.; ground bare; no wind; temp. 37°. Distance walked, estimated 14 miles. Hairy Woodpecker, 2; Downy Woodpecker, 6; Crow, 5; Goldfinch, 4; Tree Sparrow, 40; Junco, 12; Song Sparrow, 12; Cardinal, 21; Carolina Wren, 1; Winter Wren, 2; Brown Creeper, 2; White-breasted Nuthatch, 9; Tufted Titmouse, 9; Chickadee, 31. Total, 14 species, 156 individuals.—THOS. L. MCCONNELL.

Philadelphia, Pa. (Fairmount Park).—Dec. 21; 9.45 A.M. to 4 P.M. Cloudy; ground bare; no wind; temp. 40° to 45°. Merganser, 5; Red-tailed (?) Hawk, 1; Sparrow Hawk, 3; Downy Woodpecker, 5; Flicker, 1; Crow, 20; Starling, 2; Goldfinch, 3; White-throated Sparrow, 7; Junco, 22; Song Sparrow, 13; Fox Sparrow, 3; Towhee, 1; Cardinal, 35;

Carolina Wren, 1; Winter Wren, 2; White-breasted Nuthatch, 1; Chickadee, 30; Robin, 1. Total, 19 species, 156 individuals. Each bird seen by both observers.—Dr. and MRS. WM. PEPPER.

Pittsburgh, Pa. (Fern Hollow, Homewood Cemetery).—Dec. 25; 10.45 A.M. to 12 M. Cloudy, showers; wind light, south to southwest; temp. 28°. Downy Woodpecker, 2; Cardinal, 5; Carolina Wren, 2; Brown Creeper, 2; White-breasted Nuthatch, 4; Tufted Titmouse, 2; Chickadee, 5. Total, 7 species, 24 individuals.—ALBERT W. HONYWILL, JR.

Pittsburgh, Pa. to Harmarville, Pa.—Dec. 21; 8.45 A.M. to 5.05 P.M. Foggy and rainy most of the day; sunshine for a short time in the afternoon; ground bare; no wind; temp. 37°. Hairy Woodpecker, 4; Downy Woodpecker, 7; Crow, 6; Tree Sparrow, 35; Song Sparrow, 12; Cardinal, 16; Carolina Wren, 3 (2 singing); Winter Wren, 2; Brown Creeper, 11; White-breasted Nuthatch, 5; Tufted Titmouse, 25; Chickadee, 35. Total, 12 species, 151 individuals. On Dec. 14, a White-throated Sparrow and a small flock of Juncos were seen. The latter birds have been surprisingly scarce in this locality this year.—THOS. D. BURLEIGH and HARTLEY K. ANDERSON.

Reading, Pa.—Dec. 21; 9 A.M. to 12 M., and 2 to 4 P.M. Partly cloudy; ground bare; light wind; temp. 40°. Hawk, sp. 1; Downy Woodpecker, 4; Crow, 5; Meadowlark, 2; Tree Sparrow, 50; Junco, 7; Cardinal 1; Winter Wren, 2; White-breasted Nuthatch, 4; Chickadee, 5; Golden-crowned Kinglet, 4; Bluebird, 2. Total, 12 species, 86 individuals.—MR. and MRS. G. HENRY MENGEL.

Reading, Pa. (River road along the Schuylkill).—Dec. 27; 6.30 to 10 A.M. Fair; ground bare; snow in protected places; wind north, strong; temp. 5°. Distance five miles. Cooper's Hawk, 1; Downy Woodpecker, 2 (females), 1 (male); Yellow-bellied Sapsucker, 1 (female); American Crow, 800; American Goldfinch, 12; Tree Sparrow, 65; Junco, 34; Song Sparrow, 2. Total, 8 species, 918 individuals.—DR. and MRS. ALFRED O. GROSS, Bowdoin College, Brunswick, Maine.

Springs, Pa.—Dec. 21; 8.15 A.M. to 12 M. Cloudy; ground bare; no wind; temp. 34° to 45°. Downy Woodpecker, 1; Pileated Woodpecker, 1; Blue Jay, 3; Crow, 1; Tree Sparrow, 31; Junco, 10; Song Sparrow, 1; Cardinal, 2; Winter Wren, 3; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Chickadee, 4; Golden-crowned Kinglet, 4. Total, 14 species, 66 individuals.—ANSEL B. MILLER.

West Chester, Pa.—10.30 A.M. to 1.30 P.M. Cloudy; ground bare; wind east, moderate to brisk; temp. 38°. Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 6; American Crow, 35; Pine Siskin, 4; Tree Sparrow, 17; Junco, 116; Song Sparrow, 16; Cardinal, 3; Winter Wren, 3; White-breasted Nuthatch, 1; Chickadee, 3; Golden-crowned Kinglet, 3; Robin, 1. Total, 15 species, 212 individuals.—C. E. EHINGER.

West Chester, Pa.—Dec. 25; 10 A.M. to 12 M. Cloudy; no snow on ground; streams clear of ice and ground free from frost; east wind; temp. 42°. Downy Woodpecker, 6; American Crow, 50; Purple Grackle, 1; Starling, 19; Meadowlark, 1; Purple Finch, 2; Pine Siskin, 7; Junco, 200; Song Sparrow, 20; Song Sparrow, 2; Winter Wren, 1; White-breasted Nuthatch, 5; Chickadee, 22; Golden-crowned Kinglet, 2; Brown Creeper, 4. Total, 15 species, about 340 individuals.—THOS. H. JACKSON.

White Marsh Valley, near Chestnut Hill, Pa.—Dec. 21; 11.40 A.M. to 3.30 P.M. Partially cloudy; ground bare; wind southwest, light; temp. 45°. Downy Woodpecker, 2; Flicker, 1; Crow, 30; Starling, 9; Junco, 61; Song Sparrow, 5; Vesper Sparrow, 1; Cardinal, 1; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 11. Total, 12 species, 127 individuals.—GEORGE LEAR.

Williamsport, Pa.—Dec. 23; 9.30 A.M. to 4 P.M. Showers all day; ground bare; east wind; temp. 35°. Distance walked, twelve miles, the two of us walking together over same territory. Bob-white, 2; Sparrow Hawk, 1; Belted Kingfisher, 1; Downy

Woodpecker, 8; Red-bellied Woodpecker, 1; American Crow, 24; Goldfinch, 1; Tree Sparrow, 28; Junco, 49; Song Sparrow, 2; Brown Creeper, 3; White-breasted Nuthatch, 11; Tufted Titmouse, 6; Chickadee, 32. Total, 14 species, 169 individuals.—JOHN P. YOUNG and CHAS. V. P. YOUNG.

York, Pa.—Dec. 26; 8.30 A.M. to 4.30 P.M. Cloudy; ground covered with two inches of slushy snow; wind northwest, strong; temp. 35°. Crow, 64; Meadowlark, 10; Tree Sparrow, 24; Junco, 31; Song Sparrow, 2; Cardinal (male), 1; Carolina Wren, 2; Winter Wren, 1. Total, 8 species, 135 individuals.—FREE OTTEMILLER.

Baltimore, Md. (Windsor Hills, valley of Gwynn's Falls, and vicinity).—Dec. 25; 10.15 A.M. to 12.30 P.M. Cloudy until 11.45, then light rain; ground bare; wind northeast; temp. 42°. Red-shouldered (?) Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 5; Blue Jay, 11; American Crow, 13; Fish Crow, 1; Purple Finch, 3; Goldfinch, 28; White-throated Sparrow, 5; Tree Sparrow, 3; Field Sparrow, 2; Junco, 39; Song Sparrow, 3; Cardinal, 5; Carolina Wren, 4; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 3; Chickadee, 12; Bluebird, 12. Total, 21 species, 156 individuals.—MRS. J. C. GUGGENHEIMER, MISS GUGGENHEIMER and JOSEPH N. ULMAN.

Cambridge, Md.—8.30 to 10.30 A.M. Cloudy at start, turning to rain; wind northeast, light; temp. 36°. Wild duck, flying overhead, supposed species, Lesser Scaup, 4; Turkey Vulture, 10; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Southern Downy Woodpecker, 5; Yellow-bellied Sapsucker, 1; Flicker, 1; Crow, 5; Red-winged Blackbird, 29; Field Sparrow, 12; Song Sparrow, 2; Junco, flock of 60; Cardinal, 4; Loggerhead Shrike, 1; Tufted Titmouse, 9; Carolina Chickadee, 9; Golden-crowned Kinglet, 21; Mockingbird, 1. A Great Blue Heron and several Killdeer seen on Dec. 20. Total, 18 species, 176 individuals.—RALPH W. JACKSON.

Chevy Chase, Md.—Dec. 21; 11 A.M. to 2 P.M. Cloudy; ground bare; wind west, light; temp. 40°. Mourning Dove, 21; Turkey Vulture, 11; Downy Woodpecker, 4; Blue Jay, 3; Common Crow, 25; Meadowlark, 1; Goldfinch, 25; White-throated Sparrow, 5; Tree Sparrow, 66; Junco, 69; Song Sparrow, 14; Fox Sparrow, 1; Cardinal, 23; Mockingbird, 4; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 9; Black-capped [Carolina?] Chickadee, 6; Bluebird, 19. Total, 20 species, 313 individuals. Also saw Yellow-bellied Sapsucker almost daily in December up to the 19th.—HON. EDMUND PLATT, M. C. and SAM'L. W. MELLOTT, M.D.

Kensington, Md.—Dec. 30; 9.20 to 11.15 A.M.; 12 M. to 2.25 P.M. Clear and cloudy; ground bare; light northwest wind; temp. 42° to 50°; distance seven miles. Mourning Dove, 3; Turkey Vulture, 100; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 10; Crow, 120; Fish Crow, 6; Goldfinch, 20; Pine Siskin, 50; White-throated Sparrow, 5; Tree Sparrow, 15; Field Sparrow, 5; Junco, 400; Song Sparrow, 10; Cardinal, 15; Migrant Shrike, 1; Mockingbird, 1; Carolina Wren, 1; Brown Creeper, 4; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2; Tufted Titmouse, 3; Carolina Chickadee, 30; Golden-crowned Kinglet, 10; Bluebird, 13. Total, 28 species, 832 individuals.—MR. and MRS. LEO D. MINER, and RAYMOND W. MOORE.

Washington, D. C. (actual trip, Roslyn to Wellington, Va.).—Dec. 29; 8 A.M. to 5 P.M. Cloudy at first, sunny but hazy later; calm; temp. 29° to 48°. Herring Gull, 43; Lesser Scaup, 18; Killdeer, 208; Bob-white, 12; Turkey Vulture, 20; Marsh Hawk, 3; Cooper's Hawk, 2; Red-shouldered Hawk, 4; Sparrow Hawk, 3; Barred Owl, 1; Belted Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Flicker, 11; Crow, 237; Fish Crow, 7; Meadowlark, 11; Purple Grackle, 1; Purple Finch, 1; Goldfinch, 23; White-throated Sparrow, 6; Tree Sparrow, 143; Field Sparrow, 27; Junco, 64; Song Sparrow, 29; Swamp Sparrow, 1; Fox Sparrow, 1; Cardinal, 15; Loggerhead Shrike, 2; Maryland Yellowthroat, 1; Mockingbird, 4; Carolina Wren, 4; Winter Wren, 2; Brown

Creepers, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 11; Carolina Chickadee, 13; Golden-crowned Kinglet. Total, 38 species, 944 individuals.—E. A. PREBLE, S. E. PIPER and W. L. McATEE.

Four-Mile Run, Va. (across from Washington, D. C.).—Dec. 28; 9 A.M. to 2 P.M. Overcast, with occasional sunshine; wind light; temp. 29° to 38°. Herring Gull, 3; Lesser Scaup, 25; Killdeer, 100; Turkey Vulture, 3; Red-shouldered Hawk, 1; Banded Owl, 3; Downy Woodpecker, 7; Flicker, 1; Blue Jay, 1; American Crow, 35; Fish Crow, 6; Purple Finch, 1; Goldfinch, 4; Pine Siskin, 1; White-throated Sparrow, 22; Tree Sparrow, 80; Junco, 125; Song Sparrow, 8; Fox Sparrow, 1; Cardinal, 9; Carolina Wren, 7; Winter Wren, 5; Brown Creeper, 1; White-breasted Nuthatch, 11; Tufted Titmouse, 8; Carolina Chickadee, 8; Golden-crowned Kinglet, 2; Bluebird, 5. Total, 28 species, 483 individuals.—ALEX. WETMORE.

Lawrenceville, Va.—Dec. 20; 8 A.M. to 4 P.M. Cloudy, sprinkle of rain during middle of day; ground bare; no wind; temp. 29° to 54°. Killdeer, 6; Bob-white, 15; Wild Turkey, 3; Mourning Dove, 1; Turkey Vulture, 7; Black Vulture, 11; Red-shouldered Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Yellow-bellied Sapsucker, 1; Pileated Woodpecker, 5; Flicker, 2; Phoebe, 3; Crow, 26; Meadowlark, 1; Goldfinch, 4; White-throated Sparrow, 19; Field Sparrow, 4; Junco, 400 (conservative estimate); Song Sparrow, 10 (1 singing); Swamp Sparrow, 5; Fox Sparrow, 2; Cardinal, 6; Carolina Wren, 8 (1 singing); Winter Wren, 2; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 2; Tufted Titmouse, 5; Carolina Chickadee, 14; Golden-crowned Kinglet, 20; Hermit Thrush, 2. Total, 31 species, 596 individuals. Pine Siskins were seen Nov. 27.—MERRIAM G. LEWIS.

Lewisburg, W. Va.—Dec. 27; 8 to 10.45 A.M.; 1.15 to 4.45 P.M. Clear; quarter of an inch of snow; no wind; temp. 20°. Bob-white, 1; Mourning Dove, 18; Turkey Vulture, 3; Red-tailed Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 6; Pileated Woodpecker, 1; Red-bellied Woodpecker, 4; Flicker, 1; Blue Jay, 2; American Crow, 27; Meadowlark, 67; Purple Finch, 1; Tree Sparrow, 155; Junco, 103; Song Sparrow, 2; Cardinal, 4; White-breasted Nuthatch, 14; Tufted Titmouse, 13. Total, 20 species, 428 individuals. Dec. 26: 1 Saw-whet Owl, first one I ever saw here.—CHARLES O. HANDLEY.

Vicinity of Boone, N. C., elevation 3,000 to 4,000 feet.—Dec. 24; 8.30 A.M. to 12 M. Cloudy, following a clear frosty night; ground bare; wind west, light, changing to east about noon; temp. at start, 42°. Bob-white, 12; Sharp-shinned Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 3; Red-headed Woodpecker, 3; Flicker, 1; Blue Jay, 4; American Crow, 5; Meadowlark, 36; Junco, 100; Song Sparrow, 2; Fox Sparrow, 2; Cardinal, 1; Carolina Wren, 7; White-breasted Nuthatch, 20; Tufted Titmouse, 30; Chickadee, 9. Total, 17 species, 230 individuals.—ROY M. BROWN.

Louisburg, N. C.—Dec. 25. Cloudy, misty, rain; ground bare; temp. 50°. "Buz-zard," 2; Sparrow Hawk, 1; Belted Kingfisher, 1; Hairy Woodpecker, 1; Southern Downy Woodpecker, 1; Pileated Woodpecker, 1; Flicker, 2; Phoebe, 1; Crow, 25; White-throated Sparrow, 25; Field Sparrow, 6; Slate-colored Junco, 20; Song Sparrow, 15; Cardinal, 4; Mockingbird, 1; Carolina Wren, 3; Winter Wren, 5; Brown-headed Nuthatch, 1; Chickadee, 2; Golden-crowned Kinglet, 2; Hermit Thrush, 2; Bluebird, 2. Total, 22 species, 123 individuals.—JOSEPH C. JONES.

Aiken, S. C. (Pine Ridge Camp to Aiken in a.m. around camp in p.m.)—Dec. 24; 8.15 to 9.15 A.M. and 4 to 6 P.M. Cloudy; ground bare; wind northeast; temp. 52°. Turkey Vulture, 1; Screech Owl, 1; Red-headed Woodpecker, 4; Phoebe, 1; Blue Jay, 11; Crow, 1; Purple Finch, 2; White-throated Sparrow, 3; Chipping Sparrow, 2; Field Sparrow, 25; Junco, 50; Song Sparrow, 4; Cardinal, 2; Loggerhead Shrike, 2; Myrtle Warbler, 2; Pine Warbler, 3; Mockingbird, 3; Carolina Wren, 1; Brown-headed Nuthatch, 2; Tufted Titmouse, 2; Carolina Chickadee, 2; Golden-crowned Kinglet, 1.

Total, 22 species, 125 individuals.—MRS. WILLIAM M. LEVEY, and W. CHARLES-WORTH LEVEY.

Atlanta, Ga. (Piedmont Park, Druid Hills, South River Valley and Lakewood).—Dec. 28; 6 A.M. to 5 P.M. Clear at start, cloudy and rainy later; temp. about 45°. Pied-billed Grebe, 3; Wilson's Snipe, 4; Killdeer, 6; Bob-white, 10; Mourning Dove, 40; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 2; Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Red-headed Woodpecker, 3; Red-bellied Woodpecker, 1; Flicker, 10; Phoebe, 2; Blue Jay, 60; Crow, 20; Red-winged Blackbird, 20; Meadowlark, 200; Rusty Blackbird, 3; Purple Finch, 10; Goldfinch, 100; Vesper Sparrow, 50; Savannah Sparrow, 10; White-throated Sparrow, 100; Chipping Sparrow, 10; Field Sparrow, 20; Junco, 20; Song Sparrow, 40; Swamp Sparrow, 20; Fox Sparrow, 6; Towhee, 30; Cardinal, 20; Loggerhead Shrike, 6; Pine Warbler, 6; Palm Warbler, 4; American Pipit, 4; Mockingbird, 10; Brown Thrasher, 1; Carolina Wren, 20; Bewick's Wren, 2; Winter Wren, 1; Brown Creeper, 10; White-breasted Nuthatch, 4; Tufted Titmouse, 10; Carolina Chickadee, 20; Golden-crowned Kinglet, 6; Ruby-crowned Kinglet, 2; Bluebird, 20. Total, 51 species, 960 individuals.—JAMES M. SANFORD.

Savannah, Ga.—Dec. 25; 10 A.M. to 3 P.M. Cloudy; ground bare; wind southwest, high; temp. 60°. Herring Gull, 500; Ring-billed Gull, 50; Mallard, 2; Great Blue Heron, 1; Killdeer, 14; Bob-white, 6; Ground Dove, 1; Turkey Vulture, 24; Black Vulture, 4; Sharp-shinned Hawk, 1; Florida Red-shouldered Hawk, 1; Southern Downy Woodpecker, 50; Yellow-bellied Sapsucker, 15; Southern Flicker, 10; Blue Jay, 5; Crow, 35; Fish Crow, 50; Field Sparrow, 12; Cardinal, 9; Myrtle Warbler, 29; Yellow-throated Warbler, 8; Mockingbird, 4; Carolina Wren, 2; Robin, 16; Bluebird, 16. Total, 25 species, 865 individuals.—W. J. ERICHSEN.

Coronado Beach, Fla.—Dec. 25; 3.30 to 5.00 P.M. Cloudy and rain; wind heavy, southwest; temp. 65°; bar. 29.65. Herring Gull, 3; Caspian Tern, 8; Brown Pelican, 20; Lesser Scaup, 12; Wood Ibis, 2; Great Blue Heron, 9; American Egret, 2; Louisiana Heron, 6; Little Blue Heron, 5; Semipalmated Sandpiper, 75; Marsh Hawk, 3; Kingfisher, 15; Towhee, 2; Cardinal, 3; Seaside Sparrow, 50; Carolina Wren, 1. Total, 16 species, 216 individuals. The heavy wind and the rain together contributed to make this the smallest list that I have ever prepared for the Christmas Census from this locality. Usually, from 35 to 50 species may be found.—ROBERT J. LONG-STREET.

Coden, twenty-five miles south of Mobile, Ala.—Dec. 25; 10 A.M. to 4.30 P.M. Cloudy; wind northeast. Red-shouldered Hawk, 1; Sparrow Hawk, 2; Kingfisher, 1; Hairy Woodpecker, 1; Red-bellied Woodpecker, 1; Red-headed Woodpecker, 3; Flicker, 8; Phoebe, 5; Blue Jay, 7; Crow, 10; Meadowlark, 10; Song Sparrow, 1; Towhee, 2; Loggerhead Shrike, 5; Myrtle Warbler, 75; Palm Warbler, 5; Mockingbird, 5; Carolina Wren, 1; Winter Wren, 1; Robin, 100. Total, 20 species, 245 individuals.—EDWARD H. CHRISTIE.

Houston, Tex.—Dec. 25; 10.45 A.M. to 12.30 M. Clear; ground bare; wind north, strong; temp. 40°. Killdeer, 2; Turkey Vulture, 3; Marsh Hawk, 1; Florida Red-shouldered Hawk, 2; Sparrow Hawk, 4; Yellow-bellied Sapsucker, 1; Northern Flicker, 3; Phoebe, 4; Blue Jay, 6; Crow, 2; Western Meadowlark, 1; Brewer's Blackbird, 3; Goldfinch, 2; LeConte's Sparrow, 2; Field Sparrow, 2; White-throated Sparrow, 8; Song Sparrow, 7; Gray-tailed Cardinal, 10; Tree Swallow, 118; White-rumped Shrike, 5; Myrtle Warbler, 4; Pine Warbler, 42; Pipit, 47; Mockingbird, 6; Brown Thrasher, 1; Carolina Wren, 1; House Wren, 2; Red-breasted Nuthatch, 2; Tufted Titmouse, 5; Plumbeous Chickadee, 3; Ruby-crowned Kinglet, 4; Hermit Thrush, 1; Robin, 1; Bluebird, 3.—Total, 34 species, 308 individuals.—FINLAY SIMMONS.

Taylor, Tex.—Dec. 25; 8 A.M. to 4 P.M. Partly cloudy to clear; ground bare; wind,

twelve to twenty-four miles an hour; average temp. 41°. Killdeer, 15; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Flicker, 1; Crow, 2; Meadowlark, 15; Western Meadowlark, 100; Junco, 2; Song Sparrow, 6; Cardinal, 5; Loggerhead Shrike, 2; Sprague's Pipit, 125; House Wren, 1; Bewick's Wren, 1; Mockingbird, 3; Plumbeous Chickadee, 4; Texan Tufted Titmouse, 15; Golden-crowned Kinglet, 6; Bluebird, 3. Total, 19 species, 308 individuals.—H. TULLSEN.

Chillicothe, Mo.—Dec. 25; 8 A.M. to 12 M. and 1 to 2 P.M. Temp. 32°. Bob-white, 7; Prairie Chicken, 13; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; Red-headed Woodpecker, 1; Flicker, 4; Horned Lark, 12; Blue Jay, 7; Crow, 15; Goldfinch, 13; Tree Sparrow, 52; Junco, 60; Fox Sparrow, 2; Cardinal, 2; Northern Shrike, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Chickadee, 11. Total, 19 species, about 220 individuals.—DESMOND POPHAM.

Concordia, Lafayette Co., Mo.—Dec. 25; 1 to 3 P.M. Cloudy; snow; strong northwest wind; temp. 34°. Red-tailed Hawk, 1; Downy Woodpecker, 3; Red-bellied Woodpecker, 1; Prairie Horned Lark, 12; Blue Jay, 9; Red-winged Blackbird, 1; Goldfinch, 5; Tree Sparrow, 78; Junco, 104; Cardinal, 12; White-breasted Nuthatch, 3; Tufted Titmouse, 4; Black-capped Chickadee, 2. Total, 13 species, 235 individuals.—DR. FERDINAND SCHREIMANN.

Knoxville, Tenn.—Dec. 26; 8 A.M. to 2.30 P.M. Cloudy; ground bare; light northwest wind; temp. 32°. Downy Woodpecker, 2; Blue Jay, 5; Crow, 2; Junco, 2; Song Sparrow, 2; Fox Sparrow, 1; Towhee, 2; Cardinal, 5; Carolina Wren, 5; White-breasted (?) Nuthatch, 8; Tufted Titmouse, 10; Chickadee, 12. Total, 12 species, 56 individuals.—MAGNOLIA WOODWARD.

Tazewell, Tenn.—Dec. 26; 9 A.M. to 2.30 P.M. Cloudy; ground slightly covered with snow; wind northwest, brisk at times; temp. 31° at start, 32° on return. Killdeer, 4; Bob-white, 10; Mourning Dove, 6; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Hairy Woodpecker, 1; Southern Downy Woodpecker, 3; Northern Flicker, 1; Blue Jay, 3; American Crow, 12; Meadowlark, 8; Purple Finch, 1; American Goldfinch, 17; Vesper Sparrow, 6; White-throated Sparrow, 4; Field Sparrow, 8; Slate-colored Junco, 51; Song Sparrow, 6; Cardinal, 14; Cedar Waxwing, 28; Myrtle Warbler, 14; Mockingbird, 2; Carolina Wren, 6; White-breasted Nuthatch, 3; Tufted Titmouse, 2; Black-capped Chickadee, 6; Golden-crowned Kinglet, 2; American Robin, 3; Bluebird, 22. Total, 29 species, 273 individuals.—H. Y. HUGHES.

Fort Wayne, Ind.—Dec. 21; 8 A.M. to 3.15 P.M. Cloudy, clearing by noon; ground bare; wind north, light; temp. 26°. Belted Kingfisher, 2; Hairy Woodpecker, 2; Downy Woodpecker, 8; Flicker, 1; Blue Jay, 28; American Crow, 312; Purple Finch, 3; Tree Sparrow, 59; Junco, 10; Song Sparrow, 6; Cardinal, 9; White-breasted Nuthatch, 9; Tufted Titmouse, 6; Black-capped Chickadee, 30. Total, 14 species, 485 individuals.—CHAS. A. STOCKBRIDGE and A. A. RINGWALT.

Marco, Greene Co., Ind.—Dec. 25; 1.40 to 4 P.M. Cloudy, air filled with damp snow; strong northeast wind; temp. 28°. Red-shouldered Hawk, 1; Screech Owl, 1; Downy Woodpecker, 1; Red-headed Woodpecker, 3; Flicker, 4; Blue Jay, 6; Meadowlark, 3; Tree Sparrow, 11; Junco, 18; Song Sparrow, 1; Cardinal, 19; Carolina Wren, 3; Tufted Titmouse, 11; Chickadee, 22. Total, 14 species, 104 individuals.—W. M. and STELLA CHAMBERS.

Richmond, Ind.—Dec. 26; 10.30 A.M. to 3.30 P.M. Overcast; ground snow-covered; wind west by north; temp. 28°. Sparrow Hawk, 2; Hairy Woodpecker, 1; Blue Jay, 1; Crow, 350; Lapland Longspur, 100; Tree Sparrow, 12; Junco, 6; Song Sparrow, 4; Cardinal, 6; Chickadee, 5. Total, 10 species, 487 individuals.—P. B. COFFIN, MRS. COFFIN, DR. GARRO and MISS BAXTER.

Waterloo, Ind.—Dec. 25; 7.30 to 9.30 A.M. Dark and gloomy, threatening snow; ground covered with an inch of snow and ice; wind northeast, fairly strong, cold and

damp; temp. 30° to 38°. Hairy Woodpecker, 4; Downy Woodpecker, 3; Blue Jay, 5; American Crow, 10; American Goldfinch, 13; Tree Sparrow, 20; Junco, 5; Song Sparrow, 1; Cardinal, 2; Carolina Wren, 2; Brown Creeper, 5; White-breasted Nuthatch, 12; Tufted Titmouse, 1; Black-capped Chickadee, 13; Golden-crowned Kinglet, 5. Total, 15 species, 102 individuals.—HENRY A. LINK.

Cadiz, Ohio.—Dec. 21; 8.15 A.M. to 12.15 P.M. Cloudy with a light rain at noon; ground bare; wind moderate, south; temp. 36°; distance walked, as registered by a pedometer, six miles. Red-tailed Hawk, 1; Sparrow Hawk, 3; Bob-white, 10; Hairy Woodpecker, 5; Downy Woodpecker, 7; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 4; Flicker, 4; Prairie Horned Lark, 4; Blue Jay, 1; Crow, 6; Goldfinch, 6; Tree Sparrow, 50; Junco, 15; Song Sparrow, 10; Cardinal, 7; Carolina Wren, 5 (sings); Brown Creeper, 1; White-breasted Nuthatch, 10; Tufted Titmouse, 6; Chickadee, 13; Bluebird, 20. Total, 22 species, about 200 individuals.—HARRY B. MCCONNELL and JOHN WORLEY.

Campbellstown, Ohio.—Dec. 26; 9 to 11 A.M. and 12.30 to 2.30 P.M. Two inches of snow; brisk northwest wind; temp. 24°. Bob-white, 8; Ring-necked Pheasant, 1; Mourning Dove, 4; Sharp-shinned Hawk, 3; Cooper's Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 1; Flicker, 1; Horned Lark, 3; Blue Jay, 2; American Crow, 200; Tree Sparrow, 107; Junco, 3; Song Sparrow, 51; Cardinal, 3; Tufted Titmouse, 27; Chickadee, 12. Total, 19 species, 434 individuals.—W. H. WISMAN.

Canton, Ohio.—Dec. 25; 7 A.M. to 1.15 P.M. Cloudy and threatening, with severe snow storm beginning at 11.30 A.M.; strong northeast wind; temp. 32°. Red-shouldered Hawk, 1; Downy Woodpecker, 1; Blue Jay, 3; Tree Sparrow, 57; Song Sparrow, 1; Cardinal, 4; Brown Creeper, 2; White-breasted Nuthatch, 7; Tufted Titmouse, 3; Black-capped Chickadee, 9. Total, 10 species, 88 individuals.—EDWARD D. KIMES.

Cincinnati, Ohio.—Dec. 28; 10 A.M. to 12 M. Cloudy; light covering of snow on ground; temp. about 30°. Downy Woodpecker, 4; Blue Jay, 2; Crow, 4; Bronzed Grackle, 1; American Crossbill, 15; Goldfinch, 2; Junco, 75; Song Sparrow, 8; Cardinal 6; Carolina Wren, 2; Brown Creeper, 3; Tufted Titmouse, 2; Carolina Chickadee, 6. Total, 13 species, 130 individuals.—HOWARD LAWLESS.

Columbus, Ohio.—Dec. 26; 8 A.M. to 12 M. Cloudy; ground covered with snow; wind northwest; temp. 28°. Red-shouldered Hawk, 3; Hairy Woodpecker, 2; Southern Downy Woodpecker, 8; Flicker, 4; Blue Jay, 3; American Crow, 25; American Goldfinch, 2; Tree Sparrow, 50; Junco, 25; Carolina Wren, 3; Brown Creeper, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 50; Black-capped Chickadee, 2. Total, 14 species, 180 individuals.—LAURA E. LOVELL.

East Liberty, Ohio.—Dec. 27; 10 A.M. to 1 P.M. Partly cloudy, but sunny most of the time; three inches of snow; light north wind; temp. 15°; four miles. Sparrow Hawk, 1; Downy Woodpecker, 8; Horned Lark, 22; Crow, 8; Song Sparrow, 2; Cardinal 2; Brown Creeper, 1; White-breasted Nuthatch, 6; Tufted Titmouse, 25. Total, 9 species, 75 individuals.—RUSKIN S. and C. A. FREER.

Huron, Ohio.—Dec. 28; 8.30 A.M. to 12 M. Clear, then cloudy; one inch of snow on ground; wind southwest, light; temp. 24° to 32°. Herring Gull, 7; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Northern Flicker, 2; Blue Jay, 14; Crow, 6; Meadowlark, 13; Lapland Longspur, 2; Tree Sparrow, 80; Song Sparrow, 1; Cardinal, 8; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 2; Chickadee, 3. Total, 16 species, 148 individuals.—H. G. MORSE.

Laceyville, Ohio (ten miles west of Cadiz).—Dec. 21; 9 A.M. to 12.20 P.M., and 1.30 to 3.30 P.M. Dark and cloudy, with misty rain by spells; ground bare; wind moderate, south; temp. morning, 38°, noon, 46°, evening, 36°. Sparrow Hawk, 1; Screech Owl, 1; Great Horned Owl, 1; Ruffed Grouse, 1; Hairy Woodpecker, 1; Downy Woodpecker, 12; Red-

bellied Woodpecker, 6; Flicker, 1; Crow, 2; Tree Sparrow, 60; Junco, 30; Song Sparrow, 2; Cardinal, 1; Carolina Wren, 6; Brown Creeper, 1; White-breasted Nuthatch, 15; Tufted Titmouse, 20; Chickadee, 25; Bluebird, 1. Total, 19 species, 190 individuals. This is the best record for number of species by one that I ever made on a winter day.—E. E. SMITH.

Mt. Vernon, Ohio.—Dec. 28; 11 A.M. to 2 P.M. Partly cloudy; about four inches of snow; wind moderate northwest; temp. 28° to 32°. Mourning Dove, 7; Cooper's Hawk, 1; Sparrow Hawk, 3; Barred Owl, 1; Screech Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 11; Red-headed Woodpecker, 17; Red-bellied Woodpecker, 2; Flicker, 1; Blue Jay, 17; American Crow, 5; Meadowlark, 10; American Goldfinch, 2; Tree Sparrow, 2; Junco, 9; Song Sparrow, common; Cardinal, 5; White-breasted Nuthatch, 11; Tufted Titmouse, common; Chickadee, 2; Golden-crowned Kinglet, 2; Bluebird, 5. Total, 23 species.—WILLIAM L. ROBINSON.

Mt. Vernon, Ohio.—Dec. 26; 8 A.M. to 5 P.M. Cloudy; four inches snow; light west wind; temp. 28°. Ruffed Grouse, 1; Hawk (probably Red-shouldered), 1; Sparrow Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 6; Red-bellied Woodpecker, 2; Blue Jay, 8; Crow (heard); Goldfinch, 20; Tree Sparrow, 15; Junco, 30; Song Sparrow, 3; Cardinal, 5; Carolina Wren, 1; Brown Creeper, 6; White-breasted Nuthatch, 8; Tufted Titmouse, 7; Black-capped Chickadee, 12. Total, 18 species, 130 individuals.—PAUL E. DEBES and V. A. DEBES.

Spencerville, Ohio.—Dec. 25; 7 to 8.30 A.M. and 10.30 A.M. to 3 P.M. Heavy clouds; sleet turning to snow; ground bare; wind northeast, strong; temp. 33°; distance walked, nine miles. Red-shouldered Hawk, 3; Downy Woodpecker, 5; Blue Jay, 16; Crow, 15; Junco, 18; Song Sparrow, 6; Fox Sparrow (?), 1; Cardinal, 10; Brown Creeper, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 13; Chickadee, 2. Total, 12 species, 95 individuals.—SHERIDAN F. WOOD and KENNETH M. WOOD.

Youngstown, Ohio.—Dec. 25; 7 A.M. to 3 P.M. Cloudy; sleet and snow afternoon; temp. 35°; miles walked, about twelve; by automobile, twenty miles. Hooded Merganser, 2; Black Duck, 1; Ruffed Grouse, 2; Marsh Hawk, 2; Sparrow Hawk, 2; Long-eared Owl, 1; Short-eared Owl, 1; Screech Owl, 1; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 8; Red-bellied Woodpecker, 2; Flicker, 2; Blue Jay, 6; Crow, 11; Goldfinch, 11; Tree Sparrow, 37; Junco, 1; Song Sparrow, 1; Cardinal, 12; Cedar Waxwing, 1; Carolina Wren, 1; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 20; Tufted Titmouse, 10; Black-capped Chickadee, 53. Total, 27 species, 193 individuals.—GEORGE L. FORDYCE, VOLNEY ROGERS, WILLIS H. WARNER, MRS. WARNER and C. A. LEEDY.

Chicago, Ill. (Jackson Park).—Dec. 25; 2 to 5 P.M. Cloudy; ground with thin covering of snow; wind northerly, heavy; temp. 38° to 40°. Herring Gull, abundant; Ring-billed Gull, 5; Bonaparte's Gull, 7; Common Tern, 6; Black Duck, 1; Kingfisher, 1; Downy Woodpecker, 1; Blue Jay, 6; White-breasted Nuthatch, 3; Chickadee, 4; Robin, 1.—Total, 11 species, 35 individuals (plus Herring Gulls).—L. L. MACKENZIE and W. LYON.

Geneseo, Ill.—7.30 to 11 A.M. Cloudy; three inches of snow; light south wind; temp. 24°. Downy Woodpecker, 5; Red-headed Woodpecker, 2; Red-bellied Woodpecker, 1; Flicker, 1; Blue Jay, 13; American Crow, 3; American Crossbill, 14; Tree Sparrow, 20; Junco, 40; Cardinal, 7; Chickadee, 25; White-breasted Nuthatch, 3; Golden-crowned Kinglet. Total, 13 species, 134 individuals.—S. D. ANDERSON.

LaGrange, Ill.—Dec. 22; 12.45 to 4.15 P.M. Wet; slight fall of snow; wind northwest, light; temp. 37°. Screech Owl, 1; Downy Woodpecker, 4; Horned Lark, 5; Blue Jay, 10; Crow, 10; Red-winged Blackbird, 3; Purple Finch, 1; Goldfinch, 150; Lapland Longspur, 300; Tree Sparrow, 120; Junco, 10; Song Sparrow, 4; Cardinal, 2; Brown Creeper, 9; White-breasted Nuthatch, 5; Chickadee, 25. Total, 16 species, 658 individuals.—JAMES D. WATSON.

LaGrange, Ill. (seven miles along Salt Creek).—Dec. 21; 8 A.M. to 2.15 P.M. Clear; ground bare; northwest wind; temp. 35°. Hairy Woodpecker, 10; Downy Woodpecker, 15; Red-headed Woodpecker, 7; Blue Jay, 35; Crow, 17; Goldfinch, 2; Tree Sparrow, 110; Junco, 1; Song Sparrow, 3; Cardinal, 16; Brown Creeper, 14; White-breasted Nuthatch, 8; Chickadee, 27. Total, 13 species, 264 individuals. Dec. 20: Red-winged Blackbird, 2; Purple Finch, 1. Dec. 25: Red-shouldered Hawk, 3; Horned Lark, 25; Lapland Longspur, 300.—EDMUND HULSBURG.

Lewistown, Ill.—Dec. 18; 8 to 10 A.M. Partly clear; ground bare; wind northwest; temp. at start 38°, on return 42°; five miles, mostly open woods. Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-bellied Woodpecker, 2; Horned Lark, 1; Blue Jay, 8; American Crow, 4; Purple Finch, 3; American Goldfinch, 16; Tree Sparrow, 4; Chipping Sparrow, 7; Song Sparrow, 3; Cardinal, 6; Brown Creeper, 2; White-breasted Nuthatch, 3; Tufted Titmouse, 7; Black-capped Chickadee, 12; Bluebird, 3. Total, 17 species, 79 individuals.—W. S. STRODE, M.D.

Moline, Ill.—Dec. 22; 9 to 11.30 A.M. Clear; ground bare; no wind; temp. 22°. Gull, sp., 1; Duck, sp., 3; Bob-white, 40; Ring-necked Pheasant, 2; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 9; Crow, 1; Goldfinch, 1; Tree Sparrow, 100; Junco, 6; Cardinal, 5; Brown Creeper, 8; White-breasted Nuthatch, 6; Chickadee, 22; Robin, 1. Total, 16 species, 211 individuals.—MRS. EMMA J. SLOAN.

Mt. Carmel, Ill.—Dec. 26; 8 A.M. to 5 P.M. Clear; one inch snow; wind north, heavy; temp. 32°. Bob-white, 18; Hawk, sp., 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 9; Red-bellied Woodpecker, 10; Flicker, 2; Blue Jay, 13; Crow, 1; Meadowlark, 19; Junco (?), 40; Song Sparrow, 1; Cardinal, 3; Brown Creeper, 4; White-breasted Nuthatch, 1; Tufted Titmouse, 7; Chickadee, 14; Bluebird, 1. Total, 18 species, 138 individuals.—CHAS. E. CARSON.

Peoria, Ill.—Dec. 26; 9 A.M. to 12.30 P.M. Cloudy; ground covered with snow; wind north, light; temp. 24°. Herring Gull, 18; Canada Goose, 2; Hawk, sp., 1; Hairy Woodpecker, 3; Downy Woodpecker, 14; Blue Jay, 15; American Crow, 1; Tree Sparrow, 150; Junco, 200; Cardinal, 18; Cedar Waxwing, 7; Brown Creeper, 4; White-breasted Nuthatch, 8; Tufted Titmouse, 7; Black-capped Chickadee, 25; Robin, 3. Total, 16 species, 476 individuals.—W. H. PACKARD and JAMES H. SEDGWICK.

Port Byron, Ill.—Dec. 21; 9.20 to 10.45 A.M., and 1.15 to 3.30 P.M. Clear; ground bare; wind west, moderate; temp. 21° to 40°. Bob-white, 2; Rough-legged Hawk (dark phase), 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 25; Blue Jay, 12; Crow, 4; Tree Sparrow, 15; White-breasted Nuthatch, 3; Brown Creeper, 3; Chickadee, 4. Total, 12 species, 74 individuals.—J. J. SCHAFER.

Rantoul, Ill.—7 A.M. to 5 P.M. Cloudy, snow flurries; ground slightly covered with snow; wind, north to northeast, medium; temp. 30°. Cooper's Hawk, 3; Red-tailed Hawk, 1; Marsh Hawk, 1; American Rough-legged Hawk, 2; Hairy Woodpecker, 3; Downy Woodpecker, 7; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 3; Flicker, 2; Horned Lark, 20; Prairie Horned Lark, 100; Blue Jay, 50; Crow, 75; Lapland Longspur, 1,500; Chestnut-collared Longspur, 100; Vesper Sparrow, 1; Tree Sparrow, 25; Cardinal, 3; Brown Creeper, 2; White-breasted Nuthatch, 12; Red-breasted Nuthatch, 5; Tufted Titmouse, 36; Chickadee, 10. Total, 23 species, 1,862 individuals.—GEORGE E. EKBLAU, EDDIE L. EKBLAU and ARTHUR CARLSON.

Rock Island, Ill. (Arsenal Island).—Dec. 25; 10 A.M. to 12.15 P.M. Partly cloudy; three inches of snow; Mississippi River free from ice; wind northeast, light, but cold; temp. 30°. Lesser Scaup, 8; Bob-white, 26; Ring-necked Pheasant, 4; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 6; Crow, 2; Goldfinch, 1; Song Sparrow, 1; Brown Creeper, 3; White-breasted Nuthatch, 1; Chickadee, 9; Robin, 1. Total, 13 species, 67 individuals.—BURTIS H. WILSON.

Battle Creek, Mich.—Dec. 28; 10.30 A.M. to 1.55 P.M. Cloudy; two inches of snow;

wind southwest, light; temp. 29°. Hairy Woodpecker, 2; Downy Woodpecker, 1; Red-headed Woodpecker, 1; Blue Jay, 14; American Crow, 8; American Goldfinch, 8; Tree Sparrow, 20; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 4; Chickadee, 2. Total, 11 species, 63 individuals. Saw Towhee in wood on Dec. 26. Juncos and Redpolls have not arrived.—PAUL M. MORGAN.

Detroit, Mich.—Dec. 21; 11 A.M. to 3.15 P.M. Clear; ground bare; wind northerly, brisk; temp. 30°; distance covered, about four miles along River Rouge. Bob-white, 14; Red-shouldered Hawk, 2; Blue Jay, 7; Crow, 1; White-breasted Nuthatch, 3; Chickadee, 9; Robin, 2. Total, 7 species, 38 individuals.—MRS. JEFFERSON BUTLER, MR. BURTON BARNS, and MR. and MRS. F. W. ROBINSON.

Detroit, Mich.—Dec. 22; 1.15 to 3.30 P.M. Partly cloudy; ground bare; wind southwest, light; temp. 32°; distance covered, about three miles on Belle Isle. Herring Gull, 7; Downy Woodpecker, 6; Red-headed Woodpecker, 3; Brown Creeper, 1; White-breasted Nuthatch, 11; Chickadee, 1. Total, 6 species, 29 individuals.—MRS. F. W. ROBINSON.

New Buffalo, Mich.—Dec. 26; 8 to 11.30 A.M. and 1 to 3.30 P.M. Cloudy; ground lightly covered with snow; water of Lake Michigan and Galien River open; moderate northerly wind, diminishing; temp. 29° to 32°; distance covered, twelve miles. Horned Grebe, 3; Herring Gull, 9; Ring-billed Gull, 37; Lesser Scaup, 11; Goldeneye, 10; Bufflehead, 2; Coot, 3; Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-headed Woodpecker, 8; Blue Jay, 15; Crow, 7; Purple Finch, 4; Tree Sparrow, 85; Junco, 1; Towhee, 1; Cardinal, 6; White-breasted Nuthatch, 2; Chickadee, 11. Total, 19 species, 219 individuals. Many unidentified gulls and ducks out on the lake.—F. A. PENNINGTON.

Elkhorn, Wis. (Lauderdale and Delavan Lakes and vicinity).—Dec. 21; 9 A.M. to 5 P.M. Clear; ground bare; wind northwest, light at time of starting, changing to southwest; temp. 22°. Canada Goose, 125; Wilson's Snipe, 4; Marsh Hawk, 3; Hairy Woodpecker, 3; Downy Woodpecker, 6; Red-headed Woodpecker, 5; Prairie Horned Lark, 2; Blue Jay, 6; Crow, 100; Purple Grackle, 1; Tree Sparrow, 108; Junco, 4; White-breasted Nuthatch, 8; Chickadee, 16. Total, 14 species, 391 individuals.—SARAH TRAMIS, MABEL BECKWITH, CONSTANCE BECKWITH, LULU DUNBAR, HELEN MARTIN and MARGARET AUSTIN. (This census gives the combined results of three groups of census takers working in different parts of the same general locality. The ground covered was within a radius of eight or ten miles of Elkhorn. A large number of Red-headed Woodpeckers with us this winter. They feed at our lunch counters.)

Hartland, Wis.—Dec. 23; 8.30 A.M. to 4 P.M. Cloudy; ground bare; wind northeast; temp. 30°. Hairy Woodpecker, 2; Red-headed Woodpecker, 5; Blue Jay, 10; Crow, 3; Purple Finch, 5; Tree Sparrow, 4; Junco, 16; Chickadee, 10. Total, 8 species, 55 individuals.—SUSIE L. SIMONDS.

Madison, Wis.—Dec. 22; 8 A.M. to 12 M. Cloudy; ground bare; still; temp. about 20°. Red-headed Woodpecker, 1; Blue Jay, 2; Crow, 2; Tree Sparrow, 25; Junco, 6; Brown Thrasher, 1; White-breasted Nuthatch, 3; Chickadee, 6. Total, 6 species, 46 individuals. Dec. 26: Red-winged Blackbird, 2.—BELLE CLARKE.

Verona to Madison, Wis.—Dec. 24; 7.45 A.M. to 4.30 P.M. Cloudy; ground bare; still; temp. 30°. Bob-white, 12; Mourning Dove, 10; Hairy Woodpecker, 1; Downy Woodpecker, 7; Red-headed Woodpecker, 5; Blue Jay, 23; Crow, 13; Goldfinch, 60; Snow Bunting, 5; Tree Sparrow, 40; Junco, 13; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 4; Black-capped Chickadee, 18; Golden-crowned Kinglet, 2. Total, 16 species, 215 individuals. Additional species seen Dec. 21: Prairie Chicken, 2; Marsh Hawk, 4; Rough-legged Hawk, 4; Prairie Horned Lark, 9.—NORMAN DEW. BETTS.

Sparta, Wis.—Dec. 25; 9 A.M. to 3.30 P.M. Clear; ground bare; light south wind; temp. 17°. Bob-white, 20; Ruffed Grouse, 3; Downy Woodpecker, 5; Red-headed Woodpecker, 10; Crow, 31; Blue Jay, 75; Goldfinch, 38; Junco, 22; White-breasted

Nuthatch, 4; Chickadee, 73. Total, 12 species, 286 individuals.—VIOLET TURNER, CLARA LARSON, GLADYS HANEY and H. M. SHERWIN.

Whitewater, Wis.—Dec. 24; 8 A.M. to 4 P.M. Cloudy; ground bare; light north wind; temp. 29°. Pied-billed Grebe, 2; Mallard, 7; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Red-headed Woodpecker, 1; Blue Jay, 10; Crow, 10; Red-winged Blackbird, 1; Junco, 8; Brown Creeper, 1; Chickadee, 5; Golden-crowned Kinglet, 10. Total, 13 species, 58 individuals.—FLORENCE L. and ETHELL A. ESTERLY.

Winneconne, Wis.—Dec. 25; 9 A.M. to 1 P.M. Cloudy; ground bare; slight north-east wind; temp. 22°; five miles covered—meadow, marsh, woods, and lake. Herring Gull, 2; Marsh Hawk, 1; Blue Jay, 8; American Crow, 10; Downy Woodpecker, 6; Red-headed Woodpecker, 1; Brown Creeper, 5; White-breasted Nuthatch, 10; Chickadee, 12. Total, 9 species, 55 individuals.—REV. B. H. FREYE and HENRY P. SEVERSON.

Fairmont, Minn.—3 to 5 P.M. Clear; ground bare; light west wind; temp. 20°. Screech Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 9; Blue Jay, common; Crow, common; American Crossbill, 1; White-winged Crossbill, 1; Harris's Sparrow, 2; Tree Sparrow, 70; Fox Sparrow, 2; Northern Shrike, 1; Brown Creeper, 3; White-breasted Nuthatch, 7; Black-capped Chickadee, 11. Total, 14 species, 114 individuals, plus Crows and Jays.—MRS. MARY HAGERTY.

Minnehaha Falls, Minneapolis, Minn.—Dec. 25; 9.30 A.M. to 12 M. Cloudy, snowing slightly; ground lightly covered; wind northwest, moderate; temp. 11°. Downy Woodpecker, 1; Blue Jay, 3; Crow, 2; Tree Sparrow, 16; Cedar Waxwing, 2; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 5. Total, 8 species, 32 individuals.—CHARLES PHILLIPS.

St. Peter, Minn.—Dec. 28; 10 A.M. to 2 P.M. Hazy; ground bare; wind south, light; temp. 20°. Hairy Woodpecker, 2; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 8; Crow, 6; Red-winged Blackbird, 9; Tree Sparrow, 6; White-breasted Nuthatch, 2. Total, 8 species, 37 individuals.—H. J. and L. L. LADUE.

High Lake Township, Emmet Co., Iowa.—Dec. 26; 10 A.M. to 12 M. Cloudy, with snow flurries, followed by clear; ground bare; wind south; temp. 15°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 24; Crow, 10; Rusty Blackbird, 10; Tree Sparrow, 120; Nuthatch, 6; Chickadee, 38. Total, 9 species, 212 individuals.—B. O. WOLDEN.

Sioux City, Iowa.—Dec. 28; 10.30 A.M. to 1.30 P.M. Clear; ground bare; light south-east wind; temp. about 15°. Great Horned Owl (chased by a flock of 30 Crows), 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; Prairie Horned Lark, 2; Blue Jay, 3; Crow, 40; Goldfinch, 2; Tree Sparrow, 30; Junco, 2; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 10. Total, 13 species, 104 individuals.—WALTER W. BENNETT.

Wall Lake, Iowa.—Dec. 25; 1.30 to 4.45 P.M. Clear; ground bare; light north wind; temp. 26°. Prairie Chicken, 17; Screech Owl, 1; Downy Woodpecker, 1, seen by my sister; Flicker, 1; Tree Sparrow, 25; Brown Creeper, 2; White-breasted Nuthatch, 1. Total, 7 species, 48 individuals. Seen in week previous, Western Red-tailed Hawk, 1; Short-eared Owl, 1; Bronzed Grackle, 1; Black-capped Chickadee, 2.—JOHN A. SPURRELL.

Meridian, Idaho (irrigated farm lands).—Dec. 23; 9.05 A.M. to 2.45 P.M. Foggy; twelve inches of loose snow; no wind; freezing all day; five and one-half miles. Duck, sp., 30; Bob-white, 2 (heard); Chinese Pheasant, 9; Marsh Hawk, 6; Sharp-shinned Hawk, 1; Long-eared Owl, 4; Short-eared (?) Owl, 1; Red-shafted Flicker, 1; Horned Lark, 96; American Magpie, 61; Tricolored Blackbird, 30 (number probably includes San Diego Redwing and Brewer's Blackbird); Western Meadowlark, 17; House Finch, 21; Intermediate Sparrow, 34; Coues's Junco, 52; Merrill's Song Sparrow, 111; White-rumped Shrike, 1; Long-tailed Chickadee, 2; Ruby-crowned Kinglet, 3. Total, 19 species, 482 individuals.—ALEX. STALKER.

Priest River, Idaho (on flat, near the river, mostly timbered).—Dec. 18. Cloudy; about six inches of snow on the ground; calm; temp. 38°. Rocky Mountain Hairy Woodpecker, 1; Northern Pileated Woodpecker, 1; Black-headed Jay, 2; Rocky Mountain Jay, 3; Crossbill, 20; Redpoll, 2; Western Winter Wren, 2; Chestnut-backed Chickadee, 4. Total, 8 species, 35 individuals.—JOSEPH KITTREDGE, JR.

Omaha, Nebr.—1 to 4.30 P.M. Clear; ground nearly bare; wind southeast; temp. 40° to 34°; five miles. Pigeon Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 6; Prairie Horned Lark, 3; Purple Finch, 25; Goldfinch, 3; Tree Sparrow, 30; Junco, 28; Chickadee, 11. Total, 9 species, 108 individuals.—SOLON R. TOWNE.

Lennox, S. D., to Sioux Falls, to Canton by train and thence along Sioux River on foot.—Dec. 22; 9 to 10 A.M. and 11.30 A.M. to 1 P.M. Clear; ground bare; wind, south, light; temp. 25° to 38°. Prairie Chicken, 100; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Crow, 6; White-winged Crossbill (?), 12; Pine Siskin, 27; Tree Sparrow, 200; Brown Creeper, 2; White-breasted Nuthatch, 1; Chickadee, 60. Total, 11 species, 410 individuals.—WILLIAM B. MALLORY.

Aspen, Colo.—Dec. 24. Altitude, 7,500 feet. Clear and calm; eight and one-half inches of snow; temp. 10° at 10 P.M. Downy Woodpecker, 2; Black-headed Jay, 4; Rocky Mountain Jay, 2. Total, 3 species, 8 individuals.—MRS. I. L. LOGUE.

Denver, Colo.—9 A.M. to 4.30 P.M. Partly cloudy; thirty inches of snow; south wind, light; temp. 5° to 26° above. Prairie Falcon, 1; Red-shafted Flicker, 18; Long-crested Jay, 1; Woodhouse's Jay, 3; House Finch, 5; Pink-sided Junco, 1; Gray-headed Junco, 2; Northern Shrike, 1; Rocky Mountain Creeper, 1. Total, 9 species, 33 individuals.—W. H. BERGTOLD.

Bozeman, Mont.—Dec. 24; 10 A.M. to 3.30 P.M. Clear; still; three inches of snow; temp. 15°. Magpie, 18; Western Tree Sparrow, 17; Mountain Song Sparrow, 5; Bohemian Waxwing, about 90; Long-tailed Chickadee, 15. Total, 5 species, 145 individuals.—NELSON LUNDWALL.

Lashburn, Saskatchewan (latitude 53°).—Dec. 18; 8.40 A.M. to 12.55 P.M. and 1.35 to 4.30 P.M. Overcast; one-half inch of snow; temp. 27°. Prairie Sharp-tailed Grouse, 40; Ruffed Grouse, 4; Snowy Owl, 3; Prairie Horned Lark, 1; Redpoll, 40; Snow Bunting, 27; Chickadee, 1. Total, 7 species, 116 individuals.—S. W. CALVERT.

Okanagan Landing, B. C. (shore of Okanagan Lake and pine covered foothills—18 miles).—8 A.M. to 3 P.M. Clear; ground bare; wind northeast, light; temp. 22° at 8 A.M. Holboell's Grebe, 1; Horned Grebe, 7; Herring Gull, 8; American Merganser, 2; Greater Scaup, 9; American Coot, 1; Gray Ruffed Grouse, 3; Northern Pileated Woodpecker, 1; Red-shafted Flicker, 3; Magpie, 10; Clarke's Nutcracker, 4; Pygmy Owl (*pinicola*), 2; Pine Grosbeak, 3; Pine Siskin, 150; Shufeldt's Junco, 30; Sooty Song Sparrow, 3; Western Winter Wren, 1; Rocky Mountain Nuthatch, 17; Red-breasted Nuthatch, 12; Pygmy Nuthatch, 4; Black-capped Chickadee, 4; Mountain Chickadee, 32; Western Golden-crowned Kinglet, 1. Total, 23 species, 310 individuals. Observers in company. Also observed in past two days: California Gull, Canvasback, Columbian Sharp-tailed Grouse, Crow, Black-headed Jay, Western Evening Grosbeak, Western Tree Sparrow, Slate-colored Junco, Northern Waxwing, Goshawk, Saw-whet Owl, and Tree Creeper.—J. A. MUNRO and ALLAN BROOKS.

Grandview, Wash.—Dec. 24; 10.30 A.M. to 2.30 P.M. Cloudy; snowy; temp. 32°. Ring-necked Pheasant, 6; Red-bellied Hawk, 2; Spotted Owl, 1; Red-shafted Flicker, 2; Desert Horned Lark, 15; American Magpie, 6; Cowbird, 10; Red-winged Blackbird, 5; Western Meadowlark, 10; Brewer's Blackbird, 35; Willow Goldfinch, 20; Gambel's Sparrow, 35; Western Tree Sparrow, 3; Slate-colored Junco, 15; Oregon Junco, 40; Song Sparrow, 12; Northern Shrike, 1; Western Robin, 1. Total, 18 species, 213 individuals.—EDNA M. PERRY and GERTRUDE GEE.

North Yakima, Wash.—Dec. 24; 8.30 A.M. to 1.30 P.M. One inch of snow; no wind;

temp. 40°. Baldpate, 1; Mongolian Pheasant, 50; Bob-white, 100; Hungarian Partridge, 2; Wilson's Snipe, 2; Sharp-shinned Hawk, 1; Short-eared Owl, 2; Magpie, 3; Red-shafted Flicker, 15; Brewer's Blackbird, 200; Western Meadowlark, 6; White-rumped Shrike, 2; Western Goldfinch, 12; Redpoll, 2; Pine Siskin, 12; Oregon Junco, 250; Slate-colored Junco, 3; Merrill's Song Sparrow, 250; Gambel's Sparrow, 60; Black-capped Chickadee, 5. Total, 20 species, 978 individuals.—MR. and MRS. JOHN V. ELLIS, JR.

Pullman, Wash. (elevation, 2,536 feet).—Dec. 25; 11 A.M. to 2 P.M. Snowing; light east wind; six inches of snow on ground; temp. 27°. Short-eared Owl, 1; Red-shafted Flicker, 3; Western Meadowlark, 7; Crossbill, 1; Gray-crowned Leucosticte, 4; Hepburn's Leucosticte, 20; Pale Goldfinch, 3; Merrill's Song Sparrow, 3. Total, 8 species, 42 individuals.—MISSSES ROZISKEY and MCKAY, and W. T. SHAW.

Seattle, Wash. (to head of Lake Washington, returning via west shore of lake, to Pontiac).—Dec. 21; 11.45 A.M. to 5.30 P.M. Partly cloudy; ground bare; wind east by south to southeast, and south, moderate breeze, falling about 4.30 P.M.; temp. 44°. Western Grebe, 1; Hølbell's Grebe, 6; Pied-billed Grebe, 1; Western Gull, 3; Shoveller, 4; Scaup, 8; Ruddy Duck, 1; Coot, 306; Bob-white, 21; Harris's Woodpecker, 1; Western Meadowlark, 5; Oregon Junco, 5; Rusty Song Sparrow, 6. Total, 13 species, 368 individuals.—F. W. COOK.

Forest Grove, Ore. (along Gale's Creek, and in the hills to 800 feet).—Dec. 27; Cloudy with light rain in the morning; wet snow covering the ground in the timbered hills. Mountain Quail, 1; Oregon Ruffed Grouse, 7; Chinese Pheasant, 4; Harris's Woodpecker, 1; Northern Pileated Woodpecker, 2; Northwest Flicker, 3; Coast (?) Jay, 3; Western Crow, 20; Northwestern Redwing, 50; Oregon Junco, 15; Rusty Song Sparrow, 1; Oregon Towhee, 1; Western Winter Wren, 10; California Creeper, 1; Red-breasted Nuthatch, 2; Oregon Chickadee, 4; Chestnut-backed Chickadee, 15; Western Golden-crowned Kinglet, 20; Ruby-crowned Kinglet, 5. Total, 19 species, about 165 individuals.—PROF. A. M. BEAN and O. J. MURIE.

Mulino, Ore.—Dec. 24; 8.30 A.M. to 3 P.M. Cold and rainy; ground bare; wind north, light to brisk. Pied-billed Grebe, 3; Bob-white, 10; Mountain Quail, 21; Oregon Ruffed Grouse, 2; Ring-necked Pheasant, 1; Western Redtail, 1; Desert Sparrow Hawk, 1; Gairdner's Woodpecker, 4; Northern Red-breasted Sapsucker, 3; Red-shafted Flicker (including Northwestern Flicker), 53; Coast Jay, 2; Oregon Jay, 1; Western Meadowlark, 6; Shufeldt's Junco, (including Oregon Junco), 214; Rusty Song Sparrow, 29; Oregon Towhee, 11; Seattle Wren, 3; Western Winter Wren, 39; California Creeper, 3; Oregon Chickadee, 32; Chestnut-backed Chickadee, 17; Bush Tit, 25; Western Golden-crowned Kinglet, 94; Ruby-crowned Kinglet, 2; Varied Thrush, 10. Total, 25 species, 587 individuals.—ALEX. WALKER and DONALD E. BROWN.

Fresno, Cal. (along public roads).—Dec. 25; 12 M. to 1.30 P.M. and 3.30 to 4.30 P.M. Cloudy, light showers; temp. 60°. Killdeer, 2; Valley Quail, 45; Western Mourning Dove, 11; Western Red-tailed Hawk, 1; Desert Sparrow Hawk, 1; Barn Owl, 1; Burrowing Owl, 1; Red-shafted Flicker, 17; Anna Hummingbird, 1; Say Phoebe, 1; Black Phoebe, 1; California Horned Lark, 1; Bicolored Blackbird, 150; Western Meadowlark, 25; Brewer's Blackbird, 100; House Finch, 300; Western Vesper Sparrow, 12; Western Savannah Sparrow, 7; Gambel's Sparrow, 100; Thurber's Junco, 35; Heermann's Song Sparrow, 1; San Diego Towhee, 5; California Towhee, 2; California Shrike, 12; Audubon's Warbler, 53; Western Mockingbird, 38; Ruby-crowned Kinglet, 1; Western Gnatcatcher, 1; Mountain Bluebird, 20. Total, 29 species, 948 individuals.—MR. and MRS. JOHN G. TYLER.

Santa Barbara, Calif.—Dec. 27; 6.30 A.M. to 5.30 P.M. Hazy to heavily overcast; temp. 44° to 59°. Mission Canyon, Estero, Beale's, Hope Ranch, La Patera; 42 miles by automobile, but all save 5 species recorded within 3 miles of city limits. Numbers

necessarily estimated. Western Grebe, 11; Horned Grebe, 1; American Eared Grebe, 6; Pied-billed Grebe, 1; California Brown Pelican, 10; Farallon Cormorant, 300; Brandt Cormorant, 100; Great Blue Heron, 4; Green-winged Teal, 40; Cinnamon Teal, 5; Shoveller, 1,200; Pintail, 700; Canvasback, 200; Lesser Scaup, 100; Bufflehead, 3; White-winged Scoter, 200; Surf Scoter, 75; Ruddy Duck, 150; Turkey Vulture, 3; Prairie Falcon, 1; American Sparrow Hawk, 25; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Western Red-tailed Hawk, 4; Red-bellied Hawk, 2; Valley Quail, 10; Coot, 200; Least Sandpiper, 20; Red-backed Sandpiper, 5; Sanderling, 150; Black-bellied Plover, 30; Killdeer, 75; Snowy Plover, 20; Glaucous-winged Gull, 10; Western Gull, 300; California Gull, 40; Ring-billed Gull, 40; Short-billed Gull, 20; Heermann Gull, 10; Bonaparte Gull, 500; Royal Tern, 4; Belted Kingfisher, 3; Barn Owl, 2; Short-eared Owl, 2; California Screech Owl, 1; Burrowing Owl, 1; Anna Hummingbird, 6; White-throated Swift, 60; California Woodpecker, 20; Red-shafted Flicker, 200; Black Phoebe, 7; Say Phoebe, 12; California Horned Lark, 30; American Pipit, 140; Dwarf Hermit Thrush, 10; Western Robin, 4; Western Bluebird, 6; Pasadena Thrasher, 1; Western Mockingbird, 5; Tule Wren, 6; Western House Wren, 2; Pallid Wren-tit, 20; Ashy Kinglet, 150; Western Gnatcatcher, 2; Tree Swallow, 15; California Shrike, 20; Hutton Vireo, 1; Plain Titmouse, 12; California Bush-Tit, 40; California Jay, 20; Dusky Warbler, 2; Audubon's Warbler, 300; Tule Yellowthroat, 4; Brewer's Blackbird, 400; San Diego Redwing, 500; Western Meadowlark, 250; Willow Goldfinch, 20; Green-backed Goldfinch, 200; California Purple Finch, 2; California Linnet, 200; Western Lark Sparrow, 60; Western Savannah Sparrow, 3; Bryant Marsh Sparrow, 1; Belding Marsh Sparrow, 2; Large-billed Marsh Sparrow, 10; Sierra Junco, 20; Golden-crowned Sparrow, 6; Intermediate Sparrow, 400; Nuttall Sparrow, 15; San Diego Song Sparrow, 8; Rocky Mountain (?) Song Sparrow, 20; Lincoln Sparrow, 2; Valdez Fox Sparrow, 3; Spurred Towhee, 7; Anthony Brown Towhee, 20. Total, 95 species, 7,831 individuals.—WILLIAM LEON DAWSON and WILLIAM OBERLIN DAWSON.

Vallejo, Cal. (Mare Island Navy Yard).—Dec. 25; 1 to 4.30 P.M. Clear; ground bare; wind southwest, light; temp. 58°. Western Gull, 88; Desert Sparrow Hawk, 1; Short-eared Owl, 2; Red-shafted Flicker, 2; California Horned Lark, 22; California Jay, 2; Western Meadowlark, 25; Brewer's Blackbird, 2; House Finch, 2; Bryant's Marsh Sparrow, 3; Intermediate Sparrow, 5; Oregon Junco, 5; California Shrike, 1; Audubon's Warbler, 1. Total, 14 species, 161 individuals.—F. M. BENNETT.

Santa Barbara, Isle of Pines, Cuba.—Dec. 4. Cool; wind northeast, strong. Great Blue Heron (*Ardea herodias*), 1; Louisiana Heron (*Hydranassa tricolor*), 1; Cuban Green Heron (*Butorides brunneus*), 3; Black-crowned Night Heron (*Nycticorax nycticorax naevius*), 1; Least Bittern (*Ixobrychus exilis*), 1; Cuban Bob-white (*Colinus cubanensis*), 12; 'El bobo' Pigeon (*Columba inornata*), 5; Cuban Mourning Dove (*Zenaidura macroura macroura*), 24; Cuban Ground Dove (*Chamepelia passerina aflavida*), 150; Southern Turkey Vulture (*Calhates aura aura*), 20; Cuban Sparrow Hawk (*Falco sparveroides*), 10; Cuban Owl (*Gymnasio lawrencei*?), 1; Cuban Pigmy Owl (*Glaucidium siju*), 3; Cuban Parrot (*Amazona leucoccephala*), 25; Ani (*Crotophaga ani*), 18; Isle of Pines Lizard Cuckoo (*Saurolthera merlini decolor*), 4; Isle of Pines Trogon (*Priotelus temnurus vescu*), 2; Cuban Tody (*Todus multicolor*), 5; Cuban Kingbird (*Tyrannus cubensis*), 4; Cuban Crested Flycatcher (*Myiarchus sagræ*), 11; Cuban Pewee (*Blacicus caribæus*), 15; Cuban Meadowlark (*Sturnella hippocrepis*), 6; Cuban Oriole (*Icterus hypomelas*), 20; Cuban Grackle (*Holopuiscalus gundlachi*), 75; Grasshopper Sparrow (*Ammodramus savannarum australis*), 1; Melodious Grassquit (*Tiaris canora*), 1; Yellow-faced Grassquit (*Tiaris olivacea olivacea*), 30; Mangrove Warbler (*Dendroica petechia gundlachi*), 2; Yellow Palm Warbler (*Dendroica palmarum hypochrysea*), 95; Florida Yellowthroat (*Geothlypis trichas ignota*), 3; Red-legged Thrush (*Mimocichla rubripes rubripes*), 2. Total, 31 species, 551 individuals.—A. C. READ.

Notes on Winter Birds

THE space required for the Bird Census prevents the publication of a number of 'Notes from Field and Study,' but the timeliness of some make it advisable to print in this issue of BIRD-LORE certain records of the occurrence of winter birds. Birds are, of course, far more likely to be observed while migrating than after they have settled for the winter. Hence, doubtless, the apparent scarcity of certain northern species in midwinter which seemed common in the fall; though change of base incident to migration is of course also to be considered.

For example, Mr. Horace W. Wright, of Boston, in sending his census, writes; "In the vicinity of Boston we have had many Redpolls, a few Crossbills of each species, a Pine Grosbeak or two, and not less than 50 Acadian Chickadees have been observed, but none of these enter into the park list."

From Leominster, Mass., Mr. Edwin Russell Davis writes, under date of December 26, 1913: "The Evening Grosbeaks have been with us for the last two weeks, some five or six individuals, but I was unable to find them yesterday." And this species, is also recorded from Washington, Conn., by Wilhelmina C. Knowles, who writes that on December 13 fifteen were seen "feeding on seeds of the sugar maple on the ground." She states that the birds were "extremely tame."

Below we publish a note on the occurrence of Pine Grosbeaks at Sharon, Connecticut, on November 17, and we have also a record from Mrs. J. C. Anderson, of the appearance of four birds of this species at Great Barrington, Mass., on November 18, and Mrs. Caroline T. Brooks reports eight or ten Pine Grosbeaks at Goshen, Conn., on November 29. Other notes on winter birds follow.—F. M. C.

Evening Grosbeaks in Michigan

On November, 26, 1912, while walking about among a grove of choke-cherries I heard Evening Grosbeaks. I soon located the flock, which consisted of about fifty birds. Most of them were feeding upon the fallen cherries, large quantities of which lay on the ground. A number posed for their photograph. A flock of about a dozen Redpolls accompanied the Grosbeaks. Presumably they had learned that the Grosbeak is rather a slovenly feeder, scattering generous amounts of food upon the ground. This food is partly crushed by the heavy bills of the Grosbeaks so it is well prepared for the more delicate Redpolls.

Here the Evening Grosbeak is observed to feed upon the berries of sumach, mountain ash, choke-cherry, wild red cherry, seeds of maples and buds of forest trees, particularly poplars.—RALPH BEEBE, *Newberry, Michigan.*

Evening Grosbeak in Chicago

We had the pleasure to see, on Nov. 9, 1913, in Jackson Park, Chicago, Ill., a pair of Evening Grosbeaks.

We were watching a pair of Juncos and listening to a Blue Jay calling, when we saw a large dull-colored bird hopping about on the ground eating seeds and berries. When we approached it, it flew up and perched on a small bush where

we had a beautiful view of it. We could not think what kind of a bird it was at first, but it soon uttered a soft whistle something like that of a Robin, and was immediately answered from a nearby bush. We soon discovered the bird that answered and instantly identified it as a male Evening Grosbeak.

It was very brilliantly colored, the yellow almost orange, and the black on the wings and tail shone out very conspicuously. They were very tame and did not seem to fear when we approached within a few feet of them.

On November 22, we saw in the same place two old males and one young male. The birds were all tame and we managed to get a photograph but the image on the plate was very small and there was no detail.

The bird is a very rare winter visitor, and we know of several other people who saw these same birds.—LOCKE MACKENZIE and WILFRED LYON, *Chicago, Ill.*

Evening Grosbeak and Acadian Chickadee at Hartford, Conn.

The undersigned, who has been a close observer of birds for many years and is a member of The Hartford Bird Study Club, wishes to report a most excellent observation on January 1, 1914, of a flock of eleven Evening Grosbeaks. These birds were seen, with a fellow bird student, in the outskirts of one of our city parks. Much of this park is primeval forest with the usual variations brought about by the landscape gardener in parks of several hundred acres which are oftentimes, as in this case, extended beyond the city limits. All the birds were in most excellent plumage, but there was one full-plumaged male whose colors exceeded in brilliance the pictures in any of Chapman's books or 'Reed's Handbook' in that the yellow was more nearly that of the Goldfinch; but this may have been partly because the birds were sitting directly in the sunlight,—it being at half after one o'clock that the observation was made. We watched this flock as

long as we cared to, observing every detail of plumage of both species, but we did not identify more than the one male. The birds showed no fear, either because they were too stupid or because lack of association with man had not taught them that he might be dangerous. This flock has since been seen by several other members of the club and several photographs have been taken.

On November 25, I saw in Wethersfield a pair of Acadian Chickadees, and two days later, or on Thanksgiving Day, I observed for forty minutes another pair in West Hartford. As these towns are several miles apart there is no doubt but that there were two pairs of these birds. Each pair was subsequently seen by other members of the club.

Redpolls are at present reported to be quite common in Windsor, a town about six miles north of this city.—GEO. F. GRISWOLD, *Hartford, Conn.*

Acadian Chickadee at Hartford, Conn.

A rare treat has been furnished to some of the members of The Hartford Bird Study Club during the past week or ten days in observing at exceedingly close range the Acadian Chickadee. A pair of these extremely rare visitants have been fed at the hospitable feeding-tray of Miss Katherine C. Robbins in Wethersfield (about three miles from Hartford) almost daily since about November 13, 1913. Mr. Albert Morgan, Treasurer of our Club, and myself, observed these interesting creatures for nearly an hour during the early afternoon of November 22; all of that time within a distance of ten to twenty feet. They are most active in their movements, and it was difficult to say which species was more sprightly, the Acadian Chickadee or the Golden-crowned Kinglets, whose company they seemed to enjoy. The Chickadees seemed to be particularly fond of the suet placed in the tree for their use, and they would feed for a time on the suet and then feed on small bits of something gathered from the boughs of a large spruce tree nearby. In their

nervous and rapid change of positions, one would believe them to have a quantity of Warbler blood in their veins, although, of course, they were not the least bit timid, for Miss Robbins had fed them within two or three feet from her hand.

These birds differ from our native Chickadee, in that they possess no black cap, and the Acadian's under-parts are as red as those of the Red-breasted Nuthatch and very nearly the same color. The black cap is superseded by one of a buffy brown, which color seems to follow its nape and back almost to the rump in a somewhat graduated manner.

The call has a similarity to that of our native Chickadee, but is uttered much more briskly and is more wheezy. Often it will contain two higher notes followed by one low, (*chick-a-dee*), and again it can be heard with two higher notes and two low, (*chick-a-dee-dee*), but always more husky and brief than our native favorite.

—ARTHUR G. POWERS, *Hartford, Conn.*

Pine Grosbeak at Sharon, Conn.

You may be pleased to note in next issue of BIRD-LORE the phenomenally *early* arrival in this latitude of the Pine Grosbeak. My daughter saw a flock of fifteen or twenty on November 17, 1913, about a mile from my store and although she knows the birds quite well I feared she might be mistaken, as in the three or four times I had seen them in Connecticut in the past thirty years, it was never earlier than the middle of December with cold weather and plenty of snow, so this noon I walked with her to the little grove of pines, maples and shrubbery, and was most agreeably surprised to count ten of my old friends, the Pine Grosbeak. I could approach within six feet when they were in the bushes and within eight feet when they were on the ground. As usual, *one* was in the red plumage to about eight or nine in the immature and female plumage of slaty gray and yellowish on head and rump.—GEO. M. MARCKRES, *Sharon, Conn.*



HERRING GULL ON WESTERN ISLAND, LAKE CHAMPLAIN, N. Y.
Photographed by B. S. Bowdish

Book News and Reviews

REPORT OF CHIEF OF BUREAU OF BIOLOGICAL SURVEY FOR THE YEAR ENDING JUNE 30, 1913. By HENRY W. HENSHAW. From Annual Reports of the Department of Agriculture for 1913. 14 pp.

No one can read this summary of the activities of the Biological Survey for the period covered by this report without being impressed by the scope and importance of its labors. The destruction of prairie-dogs, ground-squirrels, and seed-eating rodents in the National forests, the economic status of the mole, fur-farming, control of crawfish in the Mississippi, destruction of the alfalfa weevil and cotton-boll weevil by birds, the food of wild fowl, and work in Porto Rico, are headings which indicate some phases of the economic investigations of the Survey.

Forty-one species of birds have been found feeding on the alfalfa weevil, chief among the enemies of which is Brewer's Blackbird. No less than 542 weevils were taken from the stomach of a single bird of this species. The boll-weevil is now known to be preyed on by 50 species of birds.

An index has been made to the 131 publications relating to economic ornithology which have been published by the Survey, in which 401 species of native and 59 species of foreign birds have been reported on.

Under 'Biological Investigations' reference is made to work in progress in Alabama, Arizona, California, Idaho, and North Dakota. Migration reports have been secured from about 200 volunteer observers, and acknowledgement made of the service the reports of this kind already on file were to the Survey in formulating the regulations of the migratory bird bill.

Each year shows a slight increase in the number of birds (chiefly Canaries) imported into this country. In 1908 325,285 were imported, last year the number reached 392,422.

The report shows that seven new national bird reservations, including the Aleutian Islands, were set aside during the year ending June 30, 1913, raising the total number now existing to sixty-three. Comments on the new reservations and reports from some of the old ones are given.

The report concludes with an outline of the Survey's increasingly important work for game protection.—F. M. C.

AN ACCOUNT OF THE BIRDS AND MAMMALS OF THE SAN JACINTO AREA OF SOUTHERN CALIFORNIA, with Remarks upon the Behavior of Geographic Races on the Margins of Their Habitats. By J. GRINNELL and H. S. SWARTH. Univ. of Cal. Pub. in Zool., Vol. 10, No. 10, pp. 197-406, pls. 6-10, 3 text figs. Oct. 31, 1913.

This is an important contribution to regional and philosophic zoölogy. The authors are thoroughly equipped to handle their problem in field and study and we are becoming increasingly indebted to them for the growing series of papers for which independently, or together, they are responsible.

Following details of when, where, and by whom the observations and collections on which this paper is based were made, are descriptions of the localities worked, and this is succeeded by a discussion of the 'Life Areas of the Region,' in which it is shown that the ranges of species are controlled by zonal, faunal, and associational factors. The term "Associations," as here defined, is said to be "allied in meaning to the 'formations' of some botanists." Associations are classed as of major and minor rank. Chaparral, for example, is of major rank, chinquapin chaparral of minor rank. Thus Stephens's Fox Sparrow is said to belong "to the Chinquapin minor association, of the Chaparral major association of the San Bernardino Faunal division of the Transition zone," a somewhat sonorous formula which possibly

might sound less formidable after one becomes accustomed to it.

One hundred and sixty-nine species and sub-species of birds are recorded from the area in question, and pp. 224-319 are devoted to a presentation of the facts ascertained in regard to their distribution and habits.

In discussing the behavior of geographic races on the margins of their habitats (pp. 393-395), the authors state their belief that the characters on which geographic races are based are stable and not, therefore, somatic. Their paper is illustrated with a colored map of the life zones of the San Jacinto area and an exceedingly interesting profile, along the "divide separating desert and Pacific drainages, in southern California, from the high southern Sierras to the Mexican line, showing life-zones." Like others of the series to which it belongs, in manner of arrangement and appearance this paper is above criticism.—F. M. C.

THE GANNET, A BIRD WITH A HISTORY. By J. H. GURNEY. Illustrated with numerous photographs, maps and drawings, and one colored plate by Joseph Wolf. Witherby & Co., London, 1913, 8vo. li-567, pp., upward of 150 ill.

That a volume of over 600 pages could be profitably devoted to the history of but one kind of bird would probably be doubted by most readers of books, and to them we would commend Mr. Gurney's work as a monograph which, in thoroughly covering its subject, illustrates also the need of space in which to do it. The author writes of the names and distribution of the Gannet, of the localities in which it breeds or has bred, and a census of existing colonies permits him to estimate the number of Gannets now living as 101,000.

He treats at length of the Gannet's nesting and general habits, of the development of its young, of its food and the manner in which it is secured, of its flight, of mortality among Gannets, with some discussion of the age which this bird attains, and there are also chapters on the Gannet's plumage, osteology, anat-

omy, its historic and prehistoric remains and its allies.

The mere enumeration of these major headings indicates the importance of this work, while the exceptional definiteness of the data presented makes it not only a noteworthy contribution to the literature of ornithology, but to the study of animal life in relation to environment.—F. M. C.

THE BIRDS OF CONNECTICUT. By JOHN HALL SAGE and LOUIS BENNETT BISHOP, assisted by WALTER PARK BLISS. Bull. 20, State Geological and Natural History, Hartford, 1913. 8vo, 370 pp.

Written by men who have long been leading authorities on the bird-life of Connecticut, it goes without saying that this volume both adequately and accurately presents recorded knowledge and it at once takes its place among the standard state lists. The method of treatment adopted involves a general statement of the manner of occurrence and status of the species, earliest, latest, and unseasonable records, and the situation of the nest, number of eggs and nesting dates for the breeding species.

The total number of species and sub-species recorded is 334, of which 80 are listed as Residents, 78 as Summer Residents, 38 as Winter Residents, 24 as Transient Visitants and 89 as Accidental Visitants. The last-mentioned figure shows that slightly more than one-fourth of the birds known from Connecticut are of only casual occurrence, a fact of no small interest in the study of distributional problems. In this connection it may be suggested that in the light of this winter's invasion of Acadian Chickadees the record of the Hudsonian Chickadee on page 174 should refer to *littoralis*.

A bibliography occupies pp. 202-257; and Part II of the work 'Economic Ornithology,' by Bishop, filling pp. 261-360, is an important addition to the Bulletin.

The authors state their belief that the collecting of birds and eggs for scientific purposes "can never appreciably reduce their numbers, as long as they are pro-

tected from too much slaughter in the name of sport, and their eggs and young are guarded from cats," "which," they add, "probably do as much damage to the young of our small, useful birds near our towns and cities as all other agencies combined."—F. M. C.

The Ornithological Magazines

THE CONDOR.—The autumn number of 'The Condor,' which is usually published about the middle of September, appears this time under date of October 15 and contains only three general articles. The first paper is one of the occasional technical studies which are always welcome contributions to our knowledge of the systematic relationships and distribution of some group. This paper, by H. S. Swarth, is devoted to 'A Revision of the California Forms of *Pipilo maculatus*,' the Spotted Towhee. Six subspecies are recognized as occurring in California, three of which are of general distribution. One of these, the Sacramento Towhee (*P. m. falcinellus*) is described as new, based on a specimen from the Marysville Buttes in Sutter County, and, as its name indicates, it ranges throughout the Sacramento and San Joaquin valleys. The San Francisco Towhee (*P. m. falcifer*) ranges along the coast from the northern border of the state to San Luis Obispo County, while the Spurred Towhee (*P. m. megalonyx*) occupies the southern coast region. The other three forms are very limited in distribution. The Oregon Towhee is represented by a single specimen collected on San Clemente Island; the Nevada Towhee is restricted to the Warners Mountain region in the northeastern corner of the state, and the San Clemente Towhee is found only on San Clemente and Santa Catalina Islands.

'An Unusual Nesting Site of the Mallard' on Columbia Slough, Oregon, is described by O. J. Murie. The nest, built in the crotch of an ash tree, 9 feet from the ground, contained 10 eggs. Nine of these eggs hatched safely and the young birds evidently found their way to the

water nearby but the author was too late to observe their transfer from the nest.

Under the title 'Call-notes and Mannerisms of the Wren-tit,' Joseph Grinnell recognizes seven distinct kinds of notes and comments on several inaccuracies regarding the habits ascribed to this bird.

Among the shorter notes are several records by Allan Brooks including those of a Water Turkey (*Anhinga anhinga*) seen on the California side of the Colorado River, Feb. 9, 1913; an eastern Phoebe collected at Moss Beach March 7, 1913; and a Bryant's Marsh Sparrow taken at Carpinteria, Calif., Dec. 23, 1912, the last being the southernmost occurrence of this bird thus far recorded.

In a timely review Grinnell criticizes certain inaccuracies in a 'Check-List of the Birds of the Sequoia National Park,' mentioning five deviations from the A. O. U. 'Check-List' and ten very questionable records in a list of 184 species. It is true that these should not have occurred but we venture to say that examination of a carefully annotated copy of the A. O. U. 'Check-List' would show a surprisingly large number of corrections of various kinds even in this standard reference book. No paper is free from mistakes and when they occur they should be corrected. Now that attention has been called to the Sequoia Park bird-list, we trust that the next edition will have the errors corrected and be otherwise improved. In time we should have an accurate and well annotated list of the birds of each of the National Parks.—T. S. P.

THE WILSON BULLETIN (No. 84, Sept. 1, 1913) opens with an important contribution to our knowledge of the life-history of the Glossy Ibis by Oscar E. Baynard who records no less than twenty-six nests of this rare bird from Florida; an even more extensive study of the nesting habits of a single species is presented by Cordelia J. Standwood who, on pp. 118-137, writes of the Olive-back Thrush in its summer home in Maine. Her paper, like that of Baynard's, is illustrated by some excellent photographs.

G. Eifrig tells of 'A Vacation in Quebec' and Allen Cleghorn of 'The Winter Birds of Algonquin Park, Ontario,' from which he has recorded 35 species at that season.

Number 85 of the Bulletin (Dec., 1913) opens with one of Miss Althea R. Sherman's careful, exhaustive studies of the life of the nest entitled 'Experiments in Feeding Hummingbirds During Seven Summers' and another addition to the now growing number of intensive studies of the home-life of birds is furnished by Ira N. Gabrielson, under the title 'Nest Life of the Catbird.'

In 'Bird Notes from the Southwest,' J. L. Sloanaker records with enthusiasm and hence readable observations made near Tucson, Arizona; T. C. Stephens gives the data of 'An Unusual Flight of Warblers in the Missouri Valley,' and the number is closed with editorials, notes, and reviews. No field student should be without the Wilson Bulletin.—F. M. C.

Book News

'THE AUDUBON CALENDAR' of the Massachusetts Audubon Society for 1914 resembles in style those of preceding years. It contains life-size colored figures of the Wood Pewee, Tree Swallow, Crested Flycatcher, Orchard Oriole, Golden-winged Warbler, and Chipping Sparrow. The accompanying text is from Hoffman's excellent 'Guide to the Birds of New England and Eastern New York.'

A 'BIRD ALMANAC,' published by the Audubon Society of Buffalo met with such a well-deserved reception that the edition was quickly disposed of. With a calendar it combines quotations in verse and prose, and a large number of attractive and seasonably suitable photographs of birds from nature. The success of the Buffalo Society in this venture should stimulate other local or state bird clubs to prepare almanacs or calendars adapted to the bird-life of their region.

THE first number of the second volume (January, 1914) of 'The American Bird-

House Journal,' published by the Jacobs Bird-House Co., at Waynesburg, Pa., contains reports of experiences in establishing Martin colonies, and much other news of interest to those who would have bird tenants.

MR. EDWARD F. BIGELOW, who for fourteen years has so successfully edited the department of 'Nature and Science' in St. Nicholas, has resigned from the staff of that magazine, and hereafter will devote himself more exclusively to 'The Guide to Nature,' which he proposes greatly to improve and to enlarge. Mr. E. J. Sawyer, the well-known bird artist, will take charge of a new department under the heading of 'Birds in the Bush,' and Mr. Bigelow himself will conduct a section to be known as 'The Fun of Seeing Things.'

GEO. NEWNES Ltd., 8-11 Southamp-ton Street, Strand, London, announces as important additions to their 'Country Life' library 'Our Common Sea-Birds,' by Percy R. Lowe, and 'The Peregrine Falcon at the Eyrie,' by Francis Heatherly. Both are fully illustrated with photographs from nature.

THE British Ornithologists' Bird Club issues as its 190th Bulletin 'A Guide to Selborne and Synopsis of the Life of Gilbert White,' by W. H. Mullens. Wholly aside from its distinction as the scene of Gilbert White's intimate studies of nature, its own attractions for the bird-lover may well make it a Mecca for every American ornithologist visiting England, and we therefore cordially recommend this Bulletin, which can be purchased of Witherby & Co., 320 High Holborn, London, for two shillings and sixpence.

THE Smithsonian Institution republishes in its report for 1912 (pp. 475-482) Gain's 'The Penguins of the Antarctic Regions.' As naturalist of the Charcot Expedition, Dr. Gain had exceptional opportunity for the study of these remarkable birds,

Bird-Lore

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Devoted to the Study and Protection of Birds
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Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE southward invasion this winter of Acadian Chickadees has brought this species to the notice of many observers to whom it was before a stranger, and various notes we have received indicate that the comparatively recent change in the common name of this eastern form has created more or less confusion.

In 1722 Forster described a Chickadee from Ft. Severn, Hudson Bay, as *Parus* [now '*Penthestes*] *hudsonicus*, and, until the 1910 edition of the American Ornithologists' Union's 'Check-List' appeared, this bird, commonly known as the 'Hudsonian Chickadee,' was the only bird of its type recognized by the Union from eastern North America. In 1863, however, Bryant described an eastern race of this Chickadee as *Parus hudsonicus* var. *littoralis*, basing his description on a specimen from Yarmouth, Nova Scotia. Bryant's proposed race was ignored for many years, but it proves to be recognizable, and the name *littoralis* is now applied to the Chickadees of the *hudsonicus* type inhabiting northern New England, New Brunswick, Nova Scotia, Quebec and Newfoundland, while the subspecific name *hudsonicus* is restricted to those from farther north and west. It is to this more northern race that the name Hudsonian Chickadee now properly belongs, while to *littoralis*, the more southern race, the name Acadian Chickadee has been given. The differences between the two are too slight to be

obvious in nature, but an examination of specimens proves, as might be expected, that the birds which have visited southern New England this winter are of the *littoralis* type, and hence they should be known as Acadian Chickadees.

MR. W. L. DAWSON'S bird census from Santa Barbara, published on another page, came at the last moment when it was possible to insert it. He writes: "Just as I am closing I am reminded that I have followed my habitual order of the California Check-List (Grinnell's) instead of the A. O. U., as I had intended." He adds that he had not time to revise his list, nor have we. It is too interesting to omit, and it is published therefore as an excellent illustration of the evil of using other than the accepted standard of classification for faunal lists in which convenience of reference is of infinitely greater importance than the expression of one's opinion as to whether one family of birds should precede or succeed another.

MR. FUERTES' articles on the songs of tropical birds seem to us to prove what we have long believed to be true, that one can best convey a conception of the character of certain songs by describing the effect on the listener rather than the song itself.

Purposes of exact analytical record may possibly be served by musical annotation, when the employment of this method is possible; but miles of notes accurately placing on the staff the trills of the Tinamou would not begin to convey the impression created by its song as vividly as Fuertes does in a paragraph.

LEO E. MILLER, one of the representatives of the American Museum, with Colonel Roosevelt, writes us from Buenos Aires that he saw in a warehouse there 60,000 kilos of Rhea plumes taken from killed birds. The figures are almost incredible. That a single firm should have 60 tons of the feathers of this bird at one time implies destruction on a scale which surely no species can long withstand.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the editor, at 53 Arlington Avenue, Providence, R. I.

SIGNS OF THE TIMES

I

In a recent bulletin entitled "Animal Communities in Temperate America, as Illustrated in the Chicago Region,"* a study in animal ecology of practical interest to the general nature-lover as well as to the student, man's relation to nature and his conduct toward animals are frankly discussed and criticized.

The writer makes a strong plea for "a consideration of wild nature as it really is," instead of a sentimental conception of the relations which bind together all forms of life. He draws a vivid picture of the conditions of primeval nature where the struggle for existence goes on uninterrupted or unhindered by man, and of what he styles "a man-made nature from which the conspicuous animals and their deadly struggles have been eliminated."

We are living to-day very largely in this man-made nature, a nature which is constantly changing by reason of man's activities and which is often unduly influenced for better or worse by man's legislation. In advocating a broad and thoroughly sane study of past and present natural conditions, the author of this instructive bulletin warns against a biased or narrow field of vision. "With some people," he says, "birds obscure all else in the animal world. . . . Why protect birds? Is the present attempt justified? . . . All other things being equal there are but two more reasons for special measures for the preservation of birds than for the preservation of reptiles, amphibians or insects. First, birds are subject to destruction by reckless gunners. Second, they are less dependent upon natural conditions on the ground and are better able to survive after land has been put under cultivation than some other groups. Many other animals whose diets are varied have been exterminated or will be so by agriculture, leaving the birds at the most easy point for protective effort. The protection of birds should not be urged at the expense of the extermination of other animals because of their alleged occasional attacks upon birds. (Squirrels, for example.) The great danger of acting on partial truth regarding animal interdependences makes societies for the protection of birds alone scientifically and educationally unjustified. The protection of all groups should be urged, in particular through the preservation of the natural

*Bulletin No. 5, Victor E. Shelford, Ph.D., of the University of Chicago, published by the Geographic Society of Chicago.

features upon which they depend. . . . When one comes to love an animal or a group of animals, he is in no position to draw scientific conclusions regarding it. For this reason bird enthusiasts are not always to be trusted. (Introduction of the English Sparrow into this country, for example.) Mistaken and sentimental ideas cause the killing of many useful animals and the protection of many noxious ones." (Snakes, skunks, shrews and centipedes are examples of useful animals which are ruthlessly killed wherever found.)

This arraignment of a sentimental conception of nature is closed by the significant caution that with regard to the actual relations of the living world about us, "the complexity of the problem demands careful study and conservative action."

This is not the place to amplify the statements quoted or to defend the principle of bird-protection and the methods used to obtain it. It is the place, however, to emphasize the need of a clear, unprejudiced view of nature in general and of birds in particular, and to put forward a plea for a "back to nature" attitude in teaching or presenting publicly the facts about the world in which we, together with many other animals and living things, are placed. By a "back to nature" attitude is meant studying at first-hand not only birds but all that goes to make up their world and our world, the simple method of natural history as exemplified by Gilbert White and John James Audubon. We are not all scientists or even students, but we may all become careful and broad-minded observers, who see more than birds when afield, and beyond the present when considering measures of conservation.

The reports of the State and National Audubon Societies for 1913 show that the time has come when nature-study will not much longer be kept out of public or private schools through indifference or misapprehension of our motives. Now is the time to *prove the intrinsic value* of this study, by helping teachers and educators to grasp it in a broad, sane way, not as a pleasing or entertaining form of instruction, although this it surely is, but as the basis of natural history, and later, of biology and other sciences along specialized lines.

Some of the encouraging signs of the times are; first, that the demand for our work is apparent on every hand, and second, that criticisms of our aims and methods come from quarters of scientific research, indirectly interested in helping us deal with the subjects of birds and bird-protection in a fundamental way.

II

The yearly record of the work done by our State Societies and National Association and the plans for future effort therein outlined, offer so many suggestions worthy of our careful attention that it may not be out of place to mention a few especially encouraging points; and first, let us notice that the quotation from Mr. Dutcher's report of 1909, made by Mr. Pearson, to the

effect that education of the public with reference to the value of birds will result logically in their protection, is quite in line with the best ideals of conservation as opposed to the sentimental plea for protection, condemned by Professor Shelford, provided that this education is put on a sufficiently broad basis, which we think is the aim of bird-protectionists in general.

The Junior Audubon work is fast becoming a most important part of this great educational movement. The fact that it is being extended to Alaska so efficiently, is a fine exhibition of the energy and power controlling it.

The Massachusetts bill, authorizing the appointment of paid bird-wardens by city councils or town meetings, is a significant hint of what we may expect of an aroused public sentiment as a result of such education. Hitherto, game-wardens have been appointed with little attention to their fitness for the office. California and Oregon are leading the way to the selection of wardens who shall be capable "not only of giving police service but who are fitted to carry on research and educational work"—in other words, a civil-service standard is now demanded in wide-awake communities in the matter of the protection and conservation of wild life. Arizona shows how a game-warden may be an equally capable President of the State Audubon Society.

When bird-legislation is directed, as in Oregon, toward the restriction of the use of firearms by children under fourteen, the prevention of the pollution of streams, the seizure and sale of the outfits of illegal hunters, and against the shooting of game from a public highway, railroad right of way, ocean beach or the shores of a large river, the criticism of sentimental narrow-mindedness on the part of ornithological enthusiasts loses ground.

What Mr. Swope says about coöperation with commissioners of education, editors of newspapers, and teachers in the matter of making this educational work, particularly, the Junior Audubon part of it, better understood, should be reread with care.

The transfer of Dr. C. F. Hodge from the field of specialized biological investigation to the enlarged work of applied civic biology in connection with the former, and the natural history campaign in New Jersey are both notable happenings, the outcome of which is to be watched with keen interest.

Space forbids more than the mention of the following items, each one of which might be looked up with profit. The results of supervision of nature-study in California by a special Director; the presentation of the cat problem in a leaflet by the Connecticut Audubon Society; spring-study classes in the District of Columbia; the model law of Kentucky, enforcing "the written consent of the owner" clause with reference to shooting upon farms; the new bird chart with explanatory pamphlet, issued by the Massachusetts Society, and also, the efforts of the Field Secretary in that state, to keep in touch with local work; the erection of bird-boxes in cemeteries and the investigation of the comparative mortality of the bird-population in sections where nesting-boxes are placed, the distribution of food for birds in winter by rural mail carriers and

also, coöperation with the Associated Press, in Michigan; bird- and nature-study courses in summer schools, as suggested by the work of the President of the Minnesota Society; New Jersey's permanent exhibit of the economic value of birds; the extension work of the North Dakota Agricultural College and premiums offered by the State Audubon Society in connection with membership; the practical use of fees derived from hunting-licenses in North Carolina; Pennsylvania's exhibit in Philadelphia; museum-work as enlarged by the Audubon Society of Rhode Island; exhibits and visiting schools in East Tennessee; the results of coöperation in West Virginia, and finally, the effort to furnish teachers with suitable nature-study material and topics for class use in Wisconsin.

Such a hasty survey of the manifold means now in operation for the education of the public along fair and broad lines of thought, concerning the value, use and conservation of nature, does scant justice to the inspiring effort of the bird-lovers of this country. The signs of the times point to a speedy and permanent uplift in the attitude of our people toward questions affecting wild life.

By acting upon the suggestions of individual workers and societies, the results of our work as a whole may be easily doubled and tripled.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XIII: Correlated Studies, Botany and Reading

THE BIRD'S LIFE IN WINTER

Having studied briefly the way in which birds get their food, we may very profitably look about us during the winter months and see what it means for a bird to live in cold climates from fall until spring.

And first, let us try to forget our own surroundings, and look out upon the world as the bird does. It would certainly seem a difficult matter to any civilized human being to find enough to eat and drink, to say nothing of suitable shelter even in summer or autumn, when nature is most lavish in displaying attractive food of many kinds and hospitable nooks protected from sun and storm, but in winter, one cannot imagine a more desolate fate, in northern latitudes at least, than to be cast adrift with no resource except one's hands and wits to sustain life.

The bird's problem is more difficult, since it must brave not only cold, stormy weather, a variable and greatly lessened food-supply, but also dangers and enemies which man does not need to fear. Suppose we set down this problem as one might a sum in arithmetic, in two columns, one showing the

advantages and the other the disadvantages which a bird has, and add up the results to see what the actual chances are for birds to live in winter.

Advantages—

Flight
Sight
Plumage
Sense of Direction

Disadvantages—

Scanty Food-supply
Enemies
Colds
Storms
Other Dangers

Looking at the disadvantages first, we find that the food-supply of birds is decreased in many ways. Ponds, small streams and many rivers and lakes are generally frozen over, which means that most water- and shore-birds cannot find suitable feeding-areas in cold latitudes. A few species, like the Herring Gull and others of its kind, have discovered an artificial source of food in the garbage-scows about the harbors of our large cities and towns, but the majority of fish-eating, water-loving birds must migrate south in order to live through the winter. Some of the diving ducks find food on the coast or in open water throughout cold weather, but when we consider that they may go down as far as one hundred and fifty feet to secure a meal of small crustaceans, clams or other tasty morsels, we realize that existence with them calls for far greater energy and sense of location than we would have in similar conditions.

It is not cold weather, but *the effect* of cold weather which makes ice-bound surroundings unfit for most of these birds in winter, since lack of food or inability to break through the ice in search of food are both results of frigid conditions.

Land-birds fare little better, with the exception of seed-eating and carnivorous species and a few insect-hunters like the Woodpeckers, Nuthatches and Chickadees, for the ground is frozen and covered with snow much of the time in winter, cutting off the supply of worms and sundry other small creatures.

There are no winged insects flying about trees and shrubs or through the air. There are no nectar-bearing flowers and no berries or fruits except an occasional frozen apple, pear or the like while the supply of seeds and nuts is scanty as compared with autumn abundance, indeed, one might hunt a long time without discovering sufficient nourishment of any kind for a meal.

There are pine-cones in certain places, to be sure, but only the Crossbills are fitted to pry them open. There is a great quantity of insects' eggs and larvæ, too, well hidden away in crevices or under the bark of trees, or even rolled up in occasional dead leaves that cling and flutter in the high winds of January and February.

There are some small animals which may be found by the far-seeing Hawks and Owls, field-mice and squirrels, for instance, but for the most part, the silence of the outdoor world is unmistakable—a land of plenty has become a land of want.

In addition to scarcity of food, birds must face enemies, although these are probably fewer in winter than in summer, with the exception of the enemy man, who appears in the form of the trapper or hunter. The Shrikes or Butcher-birds are conspicuous in cold weather, ready to strike the unwary Kinglet, Redpoll, or Sparrow, on their legitimate search for mice and insects, while cats prowl at large, springing upon feathered prey with easy stealth.

Some enemies of the birds are hidden away, sleeping through the cold months. The turtles, for example, some species of which are fond of the eggs of wild or domesticated Ducks, hibernate in winter, and many snakes lie in torpor too, rolled up singly or several together, in holes in the ground.

Sudden drops in temperature and sleet-storms that cover everything with an ice-mantle are very hard upon bird-life, as the chronicles of nearly every winter tell us. In addition to these dangers, there are unsuspected dangers lurking in the form of electric wires and lights, high netted wire fences and polluted streams, but these cause more destruction among birds at other seasons of the year than in winter. Can you think for what reasons this is so?

The one great advantage which birds possess over all other living things is the power of flight, a power that enables them to seek more favorable conditions when the winter is too rigorous and food over-scarce. Flight alone, however, could not save a bird from death by starvation although it might from death by cold. A wonderful sense of sight and a more mysterious sense of direction guide birds in their search for food, while a remarkable covering of feathers protects them alike from cold, moisture or heat.

Look at the bark of any tree and listen carefully as you look, with your ear against the tree if you choose, and then watch a Woodpecker, Nuthatch or Brown Creeper do the same. Feel of the bark, running a finger slowly along its rough surface. Which sees and hears and feels the most, you or the birds? Try to follow a bird on its daily round of food-gathering and think whether you could locate a second time all the places which it visits as long as a food-supply lasts. Notice how quickly a Chickadee discovers a chunk of suet put out to attract it and with what regularity it finds its way back to the novel ration. Try the same clothes on during the coldest day in winter and the warmest day in summer and stand out in a drenching rain or driving snow, if you wish to prove how far superior a bird's plumage is, as a means of protection, to our customary coverings.

After all, it is very little that we know about life in the open in winter, shut up as we are in heated houses, surrounded with artificial light when darkness draws down, fed upon forced food-supplies from hothouses and distant climes when our gardens are frozen and unproductive, and protected in numberless ways from dangers and enemies of all kinds.

A hole in a tree may look snug and tight to a Woodpecker, Owl or squirrel, but not to you or to me. The Ruffed Grouse keeps from freezing under a blanket of snow and Gulls sit upon the ice, but neither of these places would

be safe or comfortable for us, for our blood would soon cool below the temperature of the atmosphere and then we would be in danger of freezing to death. Many other animals besides man cannot live through intense cold, and these must do one of three things, go away (*migrate*), go to sleep in a protected place (*hibernate*), or perish.

Of all birds which stay with us in winter, perhaps the seed-eaters are the most attractive. The gay Redpolls come down from the north in flocks to hunt for food; also the Crossbills and occasionally a Siskin or the rare Evening Grosbeak. In New Hampshire the Pine Grosbeak has already appeared, while any day a brilliant male Purple Finch in company with several dull speckled mates may greet you, let it snow or blow as it will.

All of these birds sing, as do the Junco and Tree Sparrows, too, long before the great song-period of the year, the mating-season in late spring and early summer, so that they are especially welcome to us as February and March hold winter lingering in our neighborhood.

Make friends then with the birds in winter, when they most need your kindly care, and repay them with a generous hand for their careful surveillance of trees and shrubs infested by insect pests. *Be a part of nature*, if you can, instead of a careless onlooker. It is not nearly as difficult as it seems to become intimate with birds and animals or with any living thing, but this may not be learned in books or by the fireside. The real nature-lover follows the trail on foot and through all kinds of weather.

SUGGESTIONS

Read selections from "Sharp Eyes," by Hamilton Gibson.

"Wild Life near Home," by Dallas Lore Sharp.

"Squirrels and Other Fur-Bearers," by John Burroughs.

"Walden" (Chap. XV. Winter Animals), by Henry Thoreau.

What plants have seeds left on them in winter? What trees bear cones?

Where do worms, frogs and toads pass the winter? What animals sleep in winter?

What would you expect to find under stones in winter? In decayed stumps or under masses of dead leaves?

Are the Bob-whites as hardy as the Grouse?

What becomes of the bees, ants and spiders in cold weather?

Look up *Hibernation* in the Encyclopædia Britannica.—A. H. W.

FROM YOUNG OBSERVERS

What Good Winter Birds Are

The winter birds eat thousands of seeds. Some of the winter birds are the Downy Woodpecker, the Nuthatch, and the Junco. The Junco eats seeds. He likes the best, ragweed seeds and silver-leaf seeds.

I have a bird-table. The Nuthatch, and the Downy Woodpecker visit it every day. Once a Sparrow came to eat. Then the Nuthatch came. They

had a fight. The Nuthatch came down the limb, and flew under the Sparrow, then came behind the Sparrow and drove him off. Then the Nuthatch ate his dinner. I put nuts, crumbs, and ground corn on my table.—DAVID PRUDDEN, (age 11), *Logansville, N. J.*

[Will our young observers tell us what seeds the Junco likes best in their vicinities? Are there many seeds unfit to eat? Each owner of a lunch-counter, food-table or even of a tree with suet attached may watch the actions of birds toward each other when feeding. In my back yard, the Blue Jay, Downy Woodpecker, White-breasted Nuthatch, English Sparrow and Chickadee claim the suet put out, in the order named.—A. H. W.]

A Turkey Buzzard's Nest

Last summer, while camping in the woods near Kelly's Ripple, I noticed a large number of Buzzards in a swampy woods and concluded from their actions that they nested nearby. So I hunted for their nest several days and finally did stumble upon it by accident. It was simply a depression lined with leaves, under the overhanging edge of an old Indian mound, and contained two creamy white eggs lightly blotched with brown. I found this nest on May the fourth. It was a red-letter day for me, because I think a bird's nest is of more beauty and attraction than the bird itself, and it is the only Buzzard's nest I have ever found. I had to leave shortly afterwards and felt the keenest disappointment that I was not allowed to watch the incubation and growth of the young birds.—CHAS. E. CARSON (age 15).

[What other species of birds nest on or near the ground?—A. H. W.]

A Colony of Baltimore Orioles

I live at Rudkin, W. Va. We have a Barker Junior Audubon Club in our school and I am a member. We have studied Bob-white and Cardinal, and are going to study the Baltimore Oriole at our next meeting. We all enjoy our meetings and our pictures so much. This fall I found four Baltimore Oriole's hammock nests on our farm. There must have been a colony of them. I am going to watch for them next year and see if they come back to the same place again.

We are going to make bird-houses in January and February in order to have them ready for the first Bluebird.

I like to feed the birds now while it is so cold for they get so tame they will eat with the chickens.—LULU BARKER (age 12).

[Finding nests when the trees are bare is a pleasant and instructive diversion, for one can see plainly then just how the nests are placed and how well they were built. What other nests besides the Baltimore Oriole's may be found in winter?—A. H. W.]

A Story About a Bluebird

The Bluebirds like a warmer climate, therefore there are not many Bluebirds here in cold weather. They lay four eggs in a nest. It takes twenty-five days for their eggs to hatch, and their eggs are also blue. They lay their eggs in May and June. They build their nest of grass and hair.

The Bluebird sings sweet songs, which are pleasing to the eye and charming to the ear. The Bluebird eats grasshoppers and crickets and green grass and corn and wheat. The Bluebirds are careful not to betray the location of their home and do not sing near their nest. A female is different than a male. The male Bluebird's feathers are dark. The female's feathers are light blue, and a female does not go very far from her nest.

A Bluebird does not like anybody to bother its nest. You can tame Bluebirds to be pets. A Bluebird has a short bill and a fuzzy tail, and takes a trip down south in the winter time. A Bluebird will not fight over her young ones.

The male Bluebird does not rely only on the charms of his plumage to win him a mate but woos her also with voice. Bluebirds are most desirable citizens from every point of view, and are as useful as they are beautiful.—ROSS E. GIDEON, *Tonganoxie, Kans.*

[This little story has much information in it about one of our most attractive songsters. Now that the writer of it has learned so many facts about the Bluebird from books, it will give him added pleasure to study this species out-of-doors, and see for himself just what kinds of food it prefers, where its nest is located, when the young are hatched, whether its tail is really fuzzy or not, and many other details. Perhaps he can tell us later on whether the Bluebird is decreasing in numbers in Kansas.—A. H. W.]

The Bluebird

By GARRETT NEWKIRK

Fond lover of home;	Clay-colored his breast,
Tho' far he may roam	And white to the nest,
Over the wide, green earth,	Cerulean blue to the sky;
For mating and loving and singing he	He seems to be telling of peace upon
comes	earth,
Back to the land of his birth.	And glory of heaven on high.
First color he brings,	And when in the fall
The first note sings,	The last low call
When skies are gloomy and gray;	Of Bluebird comes to the ear,
The hour of his choice and sound of	A feeling of sorrow we have for the
his voice,	morrow,—
Make a memorial day.	To know he is gone for the year.

THE WOOD THRUSH

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET No. 72

Throughout the southern part of its range this bird is widely known as the Wood Robin. Altogether, this is not a bad name. The Wood Thrush is not far from the size of our well-known and much-beloved Redbreast, and its movements when walking or hopping along the ground are strikingly similar to those of this well-known species. A near approach reveals the fact that the general marking, particularly the heavily spotted breast, is quite distinct. At close range, therefore, there is little possibility of even the most amateur student confusing the two birds in the adult plumage. The wonderfully melodious song of this Thrush is highly characteristic. As Dr. Chapman has said, "It is a message of hope and good cheer in the morning, a benediction at the close of day."

In 'Useful Birds and Their Protection,' Mr. E. H. Forbush has written:

"The song of the Wood Thrush is one of the finest specimens of bird music that America can produce. Among all the bird songs that I have heard, it is second only in quality to that of the Hermit Thrush. It is not
The Song projected upon the still air with the effort that characterizes the bold and vigorous lay of the Robin, or the loud and intermittent carol of the Thrasher. Its tones are solemn and serene. They seem to harmonize with the sounds of the forest, the whispering breeze, the purling water, or the falling of rain-drops in the summer woods. As with most other birds, there is a great difference in the excellence of individual performers, and, while some males of the species can produce such notes as few birds can rival, this cannot be said of all. At evening, the bird usually mounts to the higher branches of the taller trees, often upon the edge of the forest, where nothing intervenes to confine or subdue his 'heavenly music.' There, sitting quite erect, he emits his wonderful notes in the most leisurely fashion, and apparently with little effort. *A-olle*, he sings, and rests; then, unhurried, pours forth a series of intermittent strains, which seem to express in music the sentiment of nature; powerful, rich, metallic, with the vanishing vibratory tones of the bell, they seem like a vocal expression of the mystery of the universe, clothed in a melody so pure and ethereal that the soul, still bound to its earthly tenement, can neither imitate nor describe it. The song rises and falls, swells and dies away, until dark night has fallen. The alarm note of the bird is a sharp *pit, pit*, several times repeated; this alarm often rises to a long roll. A soft cluck, also repeated, is sometimes heard. A mellow, rather liquid chirp is another common note."



WOOD THRUSH

Order—PASSERES

Family—TURDIDÆ

Genus—HYLOCICHLA

Species—MUSTELINA

National Association of Audubon Societies

The Wood Thrush is not among the early feathered arrivals in spring. In fact, we do not see it until the new leaves are well started, and warm weather has advanced sufficiently to render improbable the recurrence of one of those backward blasts of winter which so often occur in early spring. It is during the last ten days of April that we usually find the first Wood Thrush in the latitude of New York. Within a few days after his song is heard ringing through the woodlands, practically all the Wood Thrush delegation arrives. Love-making shortly begins, and full complements of eggs may be looked for within three weeks.



NEST AND EGGS OF WOOD THRUSH IN CEDAR TREE, DEMAREST, N. J.

Photographed by B. S. Bowdish

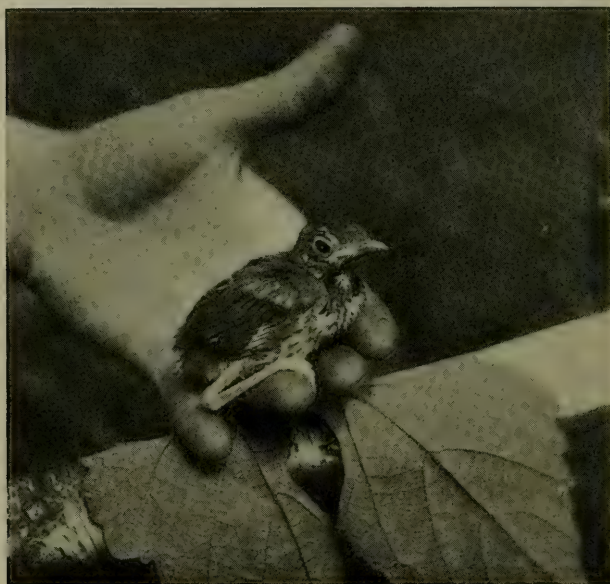
The building of a nest to suit the taste of a pair of Wood Thrushes involves no small amount of labor. Although the birds feed on the ground, and spend much of their time running or hopping about in the grass or among the fallen leaves, they do not regard this as a good place for their eggs and young. Up in a small tree from six to ten feet above the earth they choose their nesting-site. In the fork of an upright limb, or where the main stem of a sapling divides, is looked upon as a choice location. Here large dead leaves, and sometimes pieces of paper, are brought, and these, held together with sticks and twigs, form the bottom and sides of the

The Nest

structure. Mud is brought to make the inner cup secure and strong. This feature of the nest follows closely the architectural plan employed by the Robin. The similarity ends here, however, for the Wood Thrush's nest is usually lined with fine rootlets, while the Robin seems to prefer dried grass for this purpose.

The eggs are usually deposited one each day, until the full complement has been reached. Four is the number most generally laid, although the bird may sometimes be found engaged in the business of incubation with only three, and again five may be seen. The color is a delightful bluish green, and, by way of comparison, it may be said that they are lighter and do not possess such a deep green as the Cowbird. In fact, they resemble very closely those of the Robin, and if they were only slightly darker it would be almost impossible to distinguish the two.

Eggs



YOUNG WOOD THRUSH JUST AFTER LEAVING NEST

Photographed by B. S. Bowdish

In reference to its food, the Wood Thrush is classified as an insect-eating bird, and its value as such has become so generally recognized that it is now protected by local laws in all parts of the United States where it is found. As an additional safeguard, a measure known as the McLean law, which was enacted by Congress in the year 1913, absolutely prohibits the killing of these birds at all seasons in all parts of the country. In this way, the bird now dwells beneath the combined protection of the Government and the several states. As most of this bird's life is passed on the ground or among the shrubbery, we would naturally expect it

Its Food

to eat those small forms of life found in such situations; and, in fact, careful observation has found such to be true. Practically any insect which it comes upon in its apparently aimless travels about the groves and thickets is doomed to speedy destruction, unless escape is instantly effected. Beetles which inhabit the ground or the bark of trees are eaten, as well as grasshoppers, snails, spiders, and the larvæ of many moths and other succulent insects. Now and then the bird steals into the garden to take a gooseberry or blackberry, but, if the earth has been recently spaded, it shows a decided preference for any cutworm, or other undergrowing form of similar character, which may have been exposed to the light of day. Wood Thrushes eat wild fruit and berries to some extent, but their characteristic shyness evidently prevents them from acquiring that intimacy with mankind which would tend to make them feel as much at home in the cherry tree as does our dear, but at times annoying, Robin.

All wild creatures, of course, have their enemies. Snakes, weasels, hawks, and owls are among what we may call the natural enemies of small birds.

Against these destroyers our feathered friends have for long
Enemies centuries been able to hold their own in numbers. Mankind, however, has brought many changes in the wild-life conditions of the country, and, while we have destroyed many of the creatures which formerly thinned the Wood Thrush ranks, we have introduced others whose destructive effects are vastly more potent. Here is the tragic trio which we have let loose upon American wild bird life; the sling-shot boy, the all-eating Italian, and the ravenous house cat.

Classification and Distribution

The Wood Thrush belongs to the Order *Passeres*, Suborder *Oscines*, Family *Turdidæ*, Subfamily *Turdinæ*. Its scientific name is *Hylocichla mustelina*. It breeds from southern South Dakota and southern New Hampshire, south to eastern Texas and northern Florida, and winters from southern Mexico to Nicaragua and Costa Rica, occurring casually in winter as far north as New Jersey.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City

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Any person, club, school or company in sympathy with the objects of this Association may become a member, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5.00 annually pays for a Sustaining Membership
\$100.00 paid at one time constitutes a Life Membership
\$1,000.00 constitutes a person a Patron
\$5,000.00 constitutes a person a Founder
\$25,000.00 constitutes a person a Benefactor

Egret Protection for 1914

Never have the officers of this Association appealed to the members and friends of the movement for support for our campaign against the aigrette traffic with more confidence than we do at this time. This feeling is based on the knowledge that *the past year witnessed greater results from Audubon activities than has any like period in the history of American bird protection.*

The Record for 1913

Just glance for a moment at what was accomplished by the Association with the \$10,000 contributed to the Egret Protection Fund last year:

First. The passage of the Pennsylvania Anti-Plumage Law, which put an end to the business of the great wholesale feather dealers whose American headquarters were located in Philadelphia.

Second. The passage of laws preventing the sale of aigrettes also in the states of Michigan and Vermont.

Third. The employment of field agents to locate colonies of breeding Egrets in the southern states.

Fourth. The employment of a force of eighteen Wardens, who so successfully guarded the 8,000 Egrets in these rookeries that throughout the nesting season not over twelve of the protected birds are

believed to have been killed by plume-hunters.

Fifth. Secured a hearing before the Ways and Means Committee of Congress, and later, with the coöperation of the New York Zoölogical Society, conducted a campaign of publicity and personal appeal, which finally resulted in the passage of the Federal Plumage Law, prohibiting the importation of feathers of wild birds to America.

Sixth. Secured evidence which led to the prosecution of five plume-hunters in Florida and several milliners in northern cities.

Seventh. By means of attractive literature, magazine, and newspaper articles, a more systematic and wide-extended propaganda of public education on the cruelty of wearing feathers was conducted than during any previous year in our history.

With this showing of results accomplished during the past twelve months, we come before the public with the utmost confidence, believing that the good people of the country will be even more ready than heretofore to support this well-organized, well-known, and productive humane movement.

Plans for the Present Season

The Association must have at least \$10,000 at the earliest possible moment

for Egret protection work the coming year. Here are some of the things which are urgently needed:

First. A bill has already been introduced in Congress to amend the national law which prohibits the importation of feathers. This, and doubtless other measures of similar character, must be met.

Second. It is important to secure laws for stopping the sale of feathers in many states where this traffic is still permitted.

Third. The work of locating and guarding nesting colonies of Egrets has proved so remarkably successful that we feel the utmost justification in urging the continuance and increase of this effort.

Fourth. The illegal sale of aigrettes at Florida winter resorts and in millinery stores in the North must be broken up by careful detective work.

Fifth. There is much educational work yet to be done by appealing to the press and supplying schools and farmers' institutes with literature on the subject.

Sixth. To hundreds of women's clubs in the country speakers should be sent to lecture on the needless cruelty of wearing bird feathers for hat trimmings.

If our friends could but visit the home office of the National Association, and here see the number of wonderful opportunities for effective work which come flooding in, they would certainly be profoundly impressed with the great openings presented for useful service. *We have the organization, and we have the experienced workers; all we need is the necessary funds.* The work is conducted on lines of the most careful economy consistent with securing good results, and every dollar contributed to the Association is made to reach just as far as possible.

This work of preserving the White Egrets is one of the most human movements in the interests of wild life which has ever been undertaken. Will you not lend it the aid of your practical support and speak to your friends on the subject?

As we go to press, the following contributions for the Egret Protection Fund for 1914 have been received:

Balance unexpended from 1913,	
as per Annual Report.....	\$433 78
Kuser, Mr. John Dryden....	20 00
Bliss, Miss Lucy B.....	10 00
Brown, Mr. T. Hassall.....	10 00
Fairbanks, Miss Maria B....	2 00
Hodgman, Miss E. M.....	5 00
Kempton, Miss May M.....	1 00
Kimball, Mrs. D. P.....	25 00
Norfolk Bird Club.....	27 26
Phelps, Mrs. J. W.....	10 00
Tod, Mr. J. Kennedy.....	10 00
	\$554 04

To Amend the Plumage Law

Many women returning from abroad who have attempted to bring in aigrettes or other birds' feathers on their hats have been made to feel keenly the strong arm of the new federal law. There have been many outcries of resentment from those who felt it an outrage that, in their case, the law should be enforced. Law is all right for other people, but there are not many of us who will praise a restrictive legislative measure when its enforcement interferes with our own pleasure or convenience. So women who have lost their plumes by the watchfulness of the Customs officials have had no hesitancy in voicing their indignation.

And now they have found a champion in the person of Congressman E. Y. Webb, of Shelby, North Carolina. He declares that the ladies' wrongs shall be righted. To bring this about he introduced a bill (H.R. 11010) in Congress, on December 19, 1913, to amend the new plumage measure. The change which he proposes is to add the following paragraph to the existing law:

"Provided further, That, in the case of residents of the United States returning from abroad, aigrettes, quills, heads, wings, tails, skins, or parts of skins, of wild birds lawfully in the United States prior to October fourth, nineteen hundred and thirteen, and taken by such residents out of the United States to foreign countries subsequent to that date, shall be admitted to entry, on return, upon their identity being established under appropriate rules and regulations to be prescribed by the Secretary of the Treasury."



FORRESTER ISLAND, ALASKA, GOVERNMENT BIRD RESERVATION
Over 200,000 sea-birds bred here in 1913. Photographs made by the Association's special agent, Mr. Harold Heath.



LOOKING SOUTH OVER FORRESTER ISLAND
Twenty-one species of land birds were here identified



HIGHLAND MEADOW-LAND, FORRESTER ISLAND
Eagle's bathing place on roots to left



ON THE GROUND IN THE WOODS, FORRESTER ISLAND
Note entrances to nesting burrows of Leach's Petrels and Cassin's Auklets under stump and tree roots

The Silz Case

Probably the most gigantic attempt to defraud the state of New York in the matter of violating the game laws was the one for which the Franco-American Poultry Company has just paid the State Conservation Commission the sum of \$20,000 in settlement, rather than risk trial and a heavier punishment. This is the largest penalty ever paid in this country for breaking a game-protective measure.

The Bayne Law in New York State, which makes it illegal to sell American game-birds, provides, however, that any one who will secure a breeder's license from the State Conservation Commission may raise Mallard and Black Ducks, and certain other game, and market the same. Late in 1912, A. Silz, of New York City, America's largest dealer in game, secured such a permit for the Franco-American Poultry farm at Goshen, New York. To this farm he then had shipped between 3,000 and 4,000 wild Ducks, trapped for him along the coast of Virginia. At Goshen they were promptly killed, and reshipped to the markets of New York City, presumably as Ducks raised and sold under the Game Breeders' permit.

Few cases of game law violations have contained for the writer so many exciting and interesting phases as did this one. For several months Mr. C. E. Brewster, game-law expert for the United States Department of Agriculture, made this office his headquarters while in the city, ferreting out the necessary evidence to bring a prosecution. There were puzzling turns and bewildering complications in the trail of guilt, for the transactions of the Franco-American Poultry Company had been most skilfully covered.

A full story of how this case was worked out by Mr. Brewster and the Hon. George Van Kernen, Chairman of the State Conservation Commission, would fill a volume of considerable size. Long conferences were held in the offices of the National Association, in which we went over with the utmost detail every point

as the case developed. The Secretary also accompanied Mr. Brewster to the Poultry Company's farm at Goshen, where we secured much damaging information.

Although kind letters have been received from both Mr. Brewster and Mr. Van Kernen, thanking the Association for our assistance, in a perfectly truthful statement of the case it must be admitted that these energetic and resourceful officials received no very substantial or necessary aid from any outside source.

England's Plumage Bill

The bill now pending in the British Parliament to prohibit the importation of the plumage of wild birds into the United Kingdom, the full text of which appeared in BIRD-LORE for September-October, 1913, is being fought with great desperation and fierceness. The millinery wholesalers and importers, after witnessing the crash and devastation wrought among their fellows of the feather-looting fraternity in America, when our general plumage law went into effect, are struggling in a frenzied manner to stem the rising tide of English public opinion.

On the other hand, the workers of the Royal Society for the Protection of Birds and their associates are equally alive to the situation, and the English press is ringing with their presentations. There is no one in England better qualified to speak on this subject, or who has been more active in the support of the bill, than that resourceful, energetic, and individual worker, Mr. James Buckland.

The following quotations are from one of his recent vivid and forceful addresses on the subject: "Owing to the red death billow which the plumage trade was rolling through India, in utter disregard of the Wild Birds' Protection Act of 1887, the Government, in 1902, prohibited the export from British India of the plumage of all wild birds. Replying to the London Chamber of Commerce, which sought on behalf of its plumage section to obtain a repeal of this law, the Bombay Chamber

of Commerce pointed out that the prohibition was meant not only to prevent beautiful birds being exterminated, but also to prevent useful birds being reduced in numbers. The Chamber also explained that it was a recognized fact that crops of all kinds were subjected to incalculable damage by insect pests, and that the combating of this evil had become one of the greatest difficulties of the Indian agriculturist. The principal enemies of these pests were the insectivorous birds, yet these were the very species that hitherto has been relentlessly slaughtered for their plumage. Furthermore, the Chamber continued: As the birds that are killed

for millinery are held in reverence, their destruction, for any purpose, is strongly resented by Hindus throughout the country, and, with the present political unrest in India, it would be extremely unwise in any way to outrage such deep-rooted feelings.

"As an object lesson on the respect which the feather-dealer pays to the wishes of India—or of any other country, for the matter of that—that she may be allowed to keep her own birds for the benefit of her agriculture and of her people, it may serve a useful purpose to let you know that the plumage of all that is held most sacred in Hindu mythology, all that



EGRET SHOT BY FLORIDA PLUME-HUNTER AND BACK "SCALPED"
FOR THE PLUME

Photographed by Audubon Warden O. E. Baynard

is most prized for beauty or utility, in the wild-bird life of India, is, to this hour, smuggled out of that country and sold in the London feather mart. . . .

"The injury done to domestic animals and to man by biting and parasitic insects is great beyond the imagination of those who have no knowledge of tropical climes. One of the first acts of Mr. Wilson, when he became President of the United States, was to issue an Executive Order prohibiting, under heavy penalties for infraction, the destruction of any wild bird in the Panama Canal Zone. A matter of very grave concern for us all is the enormous number of fly-catching and parasite-eating birds that are being killed annually for their plumage in Central Africa. For instance, in warm countries Kingfishers feed almost entirely on insects, and it is a conservative estimate to say that in these regions every Kingfisher eats daily 150 of these noxious pests. Wherefore the sale of the skins of 216,660 Kingfishers at the last six London feather sales is—if you will pardon a somewhat free use of the vernacular of the man in the street—asking for trouble.

"From every part of the world comes the same story of wholesale slaughter of wild-bird life. Here are the totals of just a few species whose plumage has been sold during the past twelve months at the London feather sales: 216,603 Kingfishers; 21,318 Crowned Pigeons, 20,715 quills of the White Crane; 17,711 Birds-of-Paradise; 5,794 pairs of Macaw wings; 4,112 Hummingbirds; and so on, through the whole list of brilliantly plumaged birds. I ask you to ponder on these figures and—since plumages used in millinery are of greatest value when taken from the slain bird during the breeding-season—to reflect what this annual hecatomb darkly yet plainly indicates. . . .

"The German explorer, Professor Neuhauss, who recently returned to Berlin from New Guinea, has sent the following communication to the Imperial Secretary of State for the Colonies. *Inter alia*, he

says: 'The official figures as to the yearly shooting of the Birds-of-Paradise in German New Guinea do not give a correct idea of the actual state of affairs, as at least double the number is shot every year. Considering the sparsely populated coast, it is impossible to properly supervise the export of skins. There are numerous secret paths which make it possible to get a large quantity of plumage out of the country unnoticed. By limitation of the shooting, or by the introduction of a close time, practically nothing is done. The prospect of profit is far too attractive not to find ways and means for the evasion of the law. I frequently hear it remarked that the extermination of the Birds-of-Paradise on the coast is not such a serious matter after all, as the mainland is of such vast extent that there is ample room in the interior to ensure the preservation of the species. It is a remarkable fact that in nearly all branches of the animal and vegetable life in New Guinea a strict localization presents itself hardly known elsewhere. For this reason the various species of Birds-of-Paradise are found in comparatively circumscribed areas, so that if all members of a certain species are shot in their restricted habitat that species is exterminated. On some stretches of the coast the ranks of some species have been so wasted that the hunters have great trouble in collecting any skins at all. It is impossible to insist strictly on the observance of a uniform close time, for the breeding season varies very much in different localities. For instance, the Augusta Victoria Bird-of-Paradise moults from December to April, and during that time the plumes are worthless. But in May and June—the mating time—the plumes are in perfect condition. Every hunter knows this, and therefore, in these two months, the most important for propagation of the species, tries to procure as many plumes as possible. Even if the close time were extended from December to the end of August, when the young are reared, the hunters would shoot the birds during the time of reproduction, that being the only time when the feathers are

of value to trade. Of course, they would hide their booty until the expiration of the close time.

"Special evils exist near the Dutch border. During my somewhat prolonged stay in this neighborhood, Malay hunters, who had come over from the Dutch territory, were behaving outrageously. Not only did they shoot every bird they saw—of course without a license—but they terrorized the natives into doing the same. It is always the hunters of the Birds-of-Paradise who give occasion for punitive expeditions against the natives. In forcing these poor fellows to bring in skins of the Birds-of-Paradise, they proceed against them in the most brutal way. At length their victims turn upon them and kill them. Then the Government sends out an expedition for execution of punishment, and a few dozen natives are shot down.

"The Professor concludes his communication to the Imperial minister by remarking that if these miracles of Nature are to be saved from extermination a speedy and general prohibition against all shooting is absolutely necessary." . . .

"When these atrocities are brought to the notice of the feather-dealers, they say blandly that is something that no trade can direct or control. This is on a par with the shuffling excuse of the craven Macbeth, when he cried to the spirit of Banquo, 'Thou canst not say I did it! Never shake thy gory locks at me.' Not only are these revolting massacres and sickening cruelties something that the trade can control, but, what is more, the trade is directly responsible for them. Let the dealers refuse to profit by this bloody business, and the horrifying brutalities that have scandalized the world will come to an end in an instant.

"The immense commercialized slaughter of valuable and beautiful birds for the feather trade that has been going on for years with constantly increasing barbarity, as the wild beast temper of the killers rises more and more to the top, serves no defensible purpose. All the uses

of ornament and millinery can be served as well by ostrich plumes, by the feathers of poultry and of birds killed for food, and by other means. The argument that the prohibition of the importation of feathers will throw many hands out of employment is fallacious; on the contrary, there will be an increased demand for labor for the making of ornaments for hat-trimmings as substitutes for the excluded feathers, and for the making up of the feathers that are not excluded.

"There was a time—a time well within living memory—when it was thought no shame for Englishmen to regard the Colonies simply as a means to an end—as something to be exploited for private gain. But those days, happily, are past. The Empire now is one; its interests are one; and no one part has any legal or moral right to profit by the theft and illicit export of one of the natural resources of another part. Instead of attempting to justify such nefarious practices as these, it would be more seemly in English merchants—since it is manifest that it is not within the power of our dominions to protect themselves and secure the benefit and protection to which they are justly entitled—to come to their rescue in their distress.

"With what is taking place in India in my mind, I will, before I pass on to other matters, ask the trade one question. Does the material prosperity of the Empire depend on agricultural pursuits, or does it depend on the profits of a few feather merchants?

"The only other serious argument brought against the Plumage Bill is the contention that even if it became law in this country no other European power would follow England's lead. True, none of us is a seer; but I know, as well as anyone, what is going on on the Continent, and it is my belief that if Great Britain passes this bill it will be a writing, not on the wall, but on the northern sky. The people of the United States gave their answer yesterday; Great Britain must put the question tomorrow. The salvation of the birds of the world has become

the Englishman's new burden, and it is a burden that no Englishman can any longer ignore. The duty of the hour is for Great Britain to lead the way in Europe now as she had led the way in the past in every great moral step upward toward God. Let her do this, and the rest is assured. She did a noble deed when she freed the slave from his chains. She can do a noble deed now by freeing the bird from the clutches of greed."

New Members

From October 20, 1913, to January 1, 1914, the Association enrolled the following new members:

Life Members.

"E. S. C."

Coolidge, J. Randolph
Draper, Mrs. Henry
Fay, Dudley B.
Fenno, Mrs. L. Carteret
Gr w, Mrs. H. S.
Harrah, Mrs. Charles J.
Knight, Miss A. C.
Loring, Mrs. W. Caleb
Merrill, Miss F. E.
Thorn, Mrs. Augusta C. (In memoriam).
Torrey, Mrs. Alice W.
Wood, Mrs. Antoinette Eno.

Sustaining Members.

Alexander, Wm. H.
Allen, Dr. J. Wilford
Arkwright, P. S.
Arnold, Miss Mittie
Arrowood, Mrs. Bertha M.
Audubon, Miss M. E.
Bachman, Mrs. Julia R.
Bailey, Mrs. A. T.
Bartlett, Miss Florence
Beattie, W. E.
Beer, Mrs. J.
Bingham, Miss Madeline
Bliss, Mrs. Mildred B.
Blitch, N. H.
Block, Dr. E. Bates
Blood, Mrs. C. O.
Brabham, Idis
Breese, Mrs. Sydney S.
Brown, J. Epps
Bryan, Shepard
Burdick, Marcus M.
Burnham, E. F.
Campbell, John Boyleston
Campbell, Mrs. Thomas B.
Chanler, Miss Alida
Chapman, Mrs. James

Sustaining Members, continued

Cheney, Jr., Frank
Charleston Fish & Oyster Co.
Chase, Mrs. W. M.
Cheever, James G.
Civic League of Mayesville
Clafin, Miss Alice H.
Clarke, Miss Cora H.
Clarke, Mrs. Prescott, O.
Coker, Major J. L.
Colton, Jr., Mrs. Sabon W.
Cooley, Miss Rossa B.
Dana, Mrs. S. F.
Davis, Hon. C. L.
Davis, Mrs. Jeffrey.
DeLoach, Prof. R. J. H.
Department of Agriculture—
Canada.
DuBose, B. M.
DuPont, Eugene
DuPont, Eugene E.
DuPont, Mrs. Eugene E.
Dyar, Miss Dorothy
Ellis, Mrs. L. E.
Emery, Mrs. Mary M.
Emmons, Mrs. A. B.
Erickson, Mrs. A. W.
Evans, Mrs. J. G.
Evins, Samuel Nesbit
Feaster, Miss Florence G.
Flint, Charles R.
Forbes, Miss Cora J.
Ford, Frank C.
Fowler, George F.
Gale, Charles H.
Gammell, Mrs. R. J.
Gardner Dr. C. H.
Goddard, Mrs. R. H. I.
Goodridge, Dr. F. G.
Haden, C. J.
Hager, Karl
Halsted, David C.
Hamlin, Miss Eva S.
Hanahan, J. Ross
Hancock, Harry J.
Hannum, W. E.
Hardenbagh, Miss Adelaide C.
Harmon, Judson
Hart, Judge John C.
Helmer, Mrs. George J.
Hewitt, Miss Eleanor G.
Hidden, Walter
Hofer, Miss Elizabeth J.
Holter, Mrs. Sarah Sage
Homans, Mrs. John
Hornaday, Miss Nina
Huger, Alfred
Inslee, Stephen D.
Jay, Mrs. August
Jay, Pierre
Jelliffe, W. R.
Jennings, Miss A. B.
Jones, Mrs. Edward P.
Kendrick, Dr. W. F.
Keppel, David

Sustaining Members, continued

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 King, Charles S.
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 McAllister, John
 McCreary, Dr. J. P.
 McMaster, K. R.
 The News & Courier
 Newton, Dr. E. D.
 Olmsted, Dr. John C.
 Paine, 2nd, Mrs. R. T.
 Peacock, Prof. D. C.
 Pellew, Miss Marian J.
 Pendleton, Miss Ellen F.
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 Petermann, G. H.
 Planten, W. Rutger J.
 Powell, Dr. John C.
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 Ramsay, Major William G.
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 Rood, Miss Mary W.
 Rotch, Mrs. William J.
 John Rugheimers Sons
 Sanford, Miss Susan S.
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 Seabury, Miss Sarah E.
 Semken, E. H.
 Simons, E. A.
 Smith, Mrs. L. C.
 Smoak, William M.
 Spooner, Miss E. O.
 Stebbins, Miss Annie C.
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 Talbot, Miss Mary
 Taylor, P. J.
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 Villard, H. A.
 Wadsworth, H. C.
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 Webster, G. K.
 Welch, S. E.
 Welch & Eason
 White, Mrs. Hattie D.
 Williams, Miss Belle
 Williams, Mrs. D. W.
 Williams, E. A.

Sustaining Members, continued

Williams, Miss Susan
 Woodsome, Mrs. Clara W.
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 Young, Horace G.
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New Contributors

Allen, Miss Annie E.
 Anonymous
 Baker, Miss M. Elizabeth
 Blackinton, Mrs. Roswell
 Bugbee, Miss & Miss Baker
 Carson, Mrs. J. R.
 Chamberlin, Miss A. H.
 Christensen, Mrs. A. H.
 Civic League of Beaufort
 Converse, Costello C.
 Crane, Mrs. H. W.
 DeWolf, Holsey
 Ellis, The Misses
 Ferris, Miss Ida J.
 "A Friend"
 May, Miss Alice
 Newton, Mrs. Charles P.
 Page, Miss Myrtis
 Shaw, Mrs. John C.
 Treat, Robert B.
 Van Boshierck, Miss Lizzie
 Wise, Miss Anna Ellis

Notes from the Field

UNDER date of January 1, 1914, Mr. Paul Kroegel, the Association's Warden of Pelican Island Reservation, Indian River, Florida, reports—"We have now as fine a batch of young birds as I can remember for this time of year. There are about 1,600 young at present." There are two striking things about this Pelican colony; first, it is the only permanent breeding colony of Pelicans on the Atlantic coast in the United States, and second, the birds do not lay their eggs during the spring months which almost any other bird regards as the proper time for domestic activity. These Indian River Pelicans deposit their eggs usually in November or December, fully five months before the Pelicans in the Gulf colonies, less than two hundred miles away, deem it wise to begin nest-building.

UPON the occasion of the annual meeting of the Virginia State Audubon Society recently held in Richmond, Mr. M. D.

Hart, well known in business circles in that city, was elected President to succeed Mrs. W. E. Harris. Mr. Hart has begun a most active campaign of publicity in the interests of a bill which the Society will put before the Virginia Legislature this year for the purpose of establishing a state game commission to be supported by a resident hunters' license tax. In this work he not only has the coöperation of the Virginia Game and Game Fish Protective Association, but is being greatly assisted by the Field Agent of the Association, Miss Katharine H. Stuart. There is probably no woman so well known in Virginia today as Miss Stuart, her field-work and lectures during the past four years having taken her into every nook and corner of the Old Dominion State.

DR. EUGENE SWOPE, Ohio Field Agent for the Association, is working in Florida this winter. The Florida State Audubon Society has combined with the National Association in financing an extensive lecture tour for Dr. Swope. He is visiting practically all the cities and towns of importance in the state. In his addresses and newspaper work he is laying special stress on the importance of teaching the children the value of bird-study by means of Junior Audubon classes. He is also doing much to cultivate a sentiment to support the new game commission, which, largely by the efforts of the Audubon workers, was established at the session of the Florida Legislature last spring.

MR. HENRY OLDYS, Washington City's well-known bird-lecturer, has recently finished a course of lectures throughout the state of Illinois, the expense having been borne jointly by the state Society and the National Association. So well was Mr. Oldys received, and so much good resulted through his efforts, that upon the conclusion of his engagement, arrangements were immediately made by Mr. Ruthven Deane, President of the Illinois Audubon Society, to have him return shortly and continue the good work so auspiciously begun.

THERE is undoubtedly a growing tendency on the part of magistrates and judges to impose heavier penalties on people who wilfully violate the bird-protection laws. This is but another evidence of the tremendous force of public sentiment once it is aroused in the interest of any good cause. Justice James Bratt, of Bergen County, New Jersey, is one of those who believe in imposing fines of sufficient size to cause the illegal bird-killer to realize that it is no small matter to shoot birds wantonly. Recently two men were brought before him charged with shooting one Snowbird each and for hunting without a license as required by the state. For the first offense they were fined \$100 each, and for the latter \$20 each. Having to pay out \$240 for one afternoon's hunt will certainly have the effect of causing these two men and all their friends to be careful how they break the bird-laws.

ON DECEMBER 9 there was reported to the New Jersey Audubon Society the killing of a "Golden" Eagle by a man near Daretown. Another man was said to have had the bird mounted and taken home. The matter was promptly reported to the Fish and Game Warden for Salem County, and on December 24, the warden reported that he had prosecuted both parties and that fines of twenty dollars and costs had been assessed and collected in each case. The practice still obtains in far too many cases of killing on sight any large bird of unusual appearance. Those who honestly desire to obtain specimens for study may legally do so by following the procedure for obtaining permits provided for in the law. With the spirit that would deplete the rare bird fauna to "ornament" one's home there can be no sympathy.

It is much pleasure to record renewed activity in regard to local Audubon work on the part of two New England states where but little interest has been shown for the past year or two. Largely through the efforts of Mr. E. H. Forbush, our New England Agent, and seconded by

Mr. Winthrop Packard, our Agent for Massachusetts, the New Hampshire Audubon Society has been reorganized and gone actively to work. New reorganization was perfected in November with Gen. Elbert Wheeler, of Manchester, President, and Rev. Manley B. Townsend, of Nashua, Secretary. The Vermont Audubon Society was revived in the same way, Dr. Avery E. Lambert, of Middlebury College, was elected President, and Mr. C. J. Lyford, of Middlebury, was chosen Secretary. These new organizations have our most hearty goodwill and we hope to be able to coöperate with them in many fields of activity during the days to come.

MR. HART, President of the Virginia Audubon Society reports: "I wish to report how the Virginia Audubon Society last year was instrumental in shortening the hunting-season on Quail. This was accomplished by our writing to the Board of Supervisors in each county in the state, calling their attention to the reported scarcity of game and the advisability of some action on their part which would keep the hunters out of the fields. The Supervisors have power to shorten seasons for killing game in this state. We followed this up in January by an inquiry, addressed to the Clerk of each county in the state, as to what had been done by the Supervisors, and found that twenty-two counties had shortened the season after our December notice, and that twenty-three counties had closed the season before our warning. The late Dr. Robert L. Blanton and I went over these inquiry cards and estimated conservatively the number of birds (Quail) saved to be from 20,000 to 25,000. These estimates were arrived at by taking the area of a county in square miles and estimating so many birds to the mile and then taking the population of the county and estimating that about three men in a thousand would be hunting each day, with an average of about six birds to the man, then multiplying the number of birds by days closed. We believed our estimate to be about as

accurate as such estimates usually are. These cards were turned over to the Department of Agriculture, in Washington, and the Society's action in the matter received high commendation in papers devoted to game matters. In March I went to Washington on two occasions in the interest of the McLean Migratory Bill, which later became the law of the United States of America. As to whether my services there amounted to anything I have only to say that every Virginia member of Congress in both houses voted for the bill."

MR. WILLIAM FINLEY, the Association's Field Agent for the Pacific Coast, and also State Game Warden for Oregon, has been very active of late in enforcing the state law against the wearing of the forbidden "aigrette." In referring to some of his work in this line the "Morning Oregonian" for December 17, 1913, says: "One of the most beautiful aigrette plumes that any of the deputies of State Game Warden Finley has ever secured is reposing in the offices in the Yeon building, as a spoil of a raid which Finley ordered on the dressing-room of Miss Lillian Herlein, prima donna at the Orpheum Theater.

"When Miss Herlein stepped from the stage Monday afternoon, Mrs. J. C. Murray, a deputy warden, was on hand to seize the plume. Despite the agitated protests of the temperamental singer, they were shorn from her head-dress.

"Since the crusade on the forbidden plume began about six months ago, Mr. Finley's deputies have taken in some wonderful plumes. It is said that the piece formerly owned by Miss Herlein was, in numbers of individual feathers, almost equal to the fruits of the entire campaign. It had forty-six dozen distinct plumes, it is said, and the money value was about \$412 at the time of the purchase, according to report.

"Her first appearance was at Monday's matinee. In less than five minutes after she took the stage the telephone rang, and the voice of an irate woman, who was recently relieved of a plume, informed the Game Warden of the prize bunch of feath-

ers on display in the theater. Mrs. Murray was dispatched to the scene. She informed the management of her purpose and went behind the scenes to make a closer inspection of the plumes. She said she found they were real, and informed the singer of the Oregon law."

BEGINNING this year, the Field Columbian Museum of Chicago is to put into operation a systematic plan of having some of its collections of mounted wild birds used in the public schools, somewhat after the manner which has been employed for several years by the American Museum of Natural History in New York City. It had long been felt that the collections were not of so much use to the public as they might be made. It was to supply such facilities as these for object lessons in the public schools that N. W. Harris, a Chicago banker, conceived the plan of extending the Field Museum into the schoolroom, and in December, 1911, donated \$250,000 to carry out the work. Long a friend of the Field Museum, he had with others realized that the museum was not in some ways reaching the people as it should. He had studied museum reports and saw that out of a public school membership of 280,000 the total number that had visited the museum during the year had been about 22,000, and that of the latter number the vast majority had poorly comprehended what they saw; for teachers had reported that school-day visits to the museum were generally regarded by the pupils as holidays, valuable because they afforded a variety from school routine.

Mr. Harris believed that the museum contained splendid opportunities to aid in the education of the young, if a different method of seeking to reach them with the

riches were adopted. Accordingly he offered to coöperate with the Field Museum in extending the institution into the classrooms of certain grades of the public school through the means of little traveling museums, or cabinets, placed in the classrooms of certain grades at certain intervals accompanied by brief lectures descriptive of the cabinets, and elaborating the labels attached to the specimens. The result was the foundation of \$250,000 which Mr. Harris decided upon, after he had advised with leading teachers and sociologists.

Mr. Bowdish

Mr. B. S. Bowdish, who since November 1905, has been chief clerk in the home office of the Association, left our employ on January 17, to devote his entire time, in future, to the position of Secretary-Treasurer of the New Jersey State Audubon Society. It will be recalled that it was largely through the efforts of Mr. Bowdish that the New Jersey Audubon Society was reorganized and incorporated in 1910. On December 29 of that year, the board of directors met, and he was elected secretary. From that moment the New Jersey work began to expand, and since then the Society has in every way been a wide-awake and going institution. In addition to his duties with the National Association, Mr. Bowdish has been able to bring the New Jersey work up to such a stage that the demand for his entire time to look after its welfare has become imperative. For the present, his office will be at Demarest. Mr. Bowdish takes with him the good-will of the directors and office force, and we prophesy for him the great success which his conscientious devotion to the work so warmly merits.



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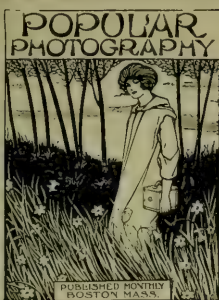
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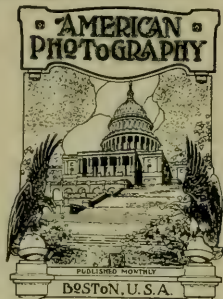
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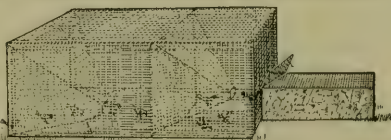
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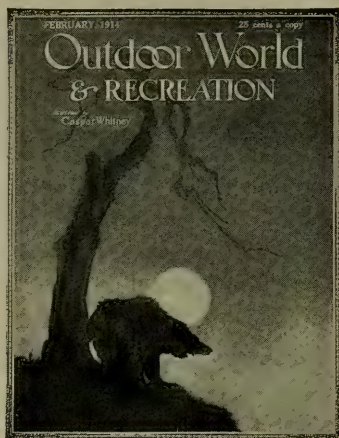


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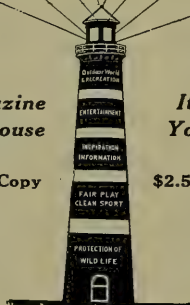
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MARCH—APRIL, 1914

No. 2

The Electric Current in Bird Photography*

By GUY A. BAILEY, Geneseo, N. Y.

With photographs by the author

ANYONE who has attempted bird photography, and used the uncertain thread or the bulb with its cumbersome tubing for releasing the shutter, must have wished for an electric shutter.

So far as I can find out, there is no such shutter on the market. It would seem to be a simple contrivance if there were a large demand for the product.

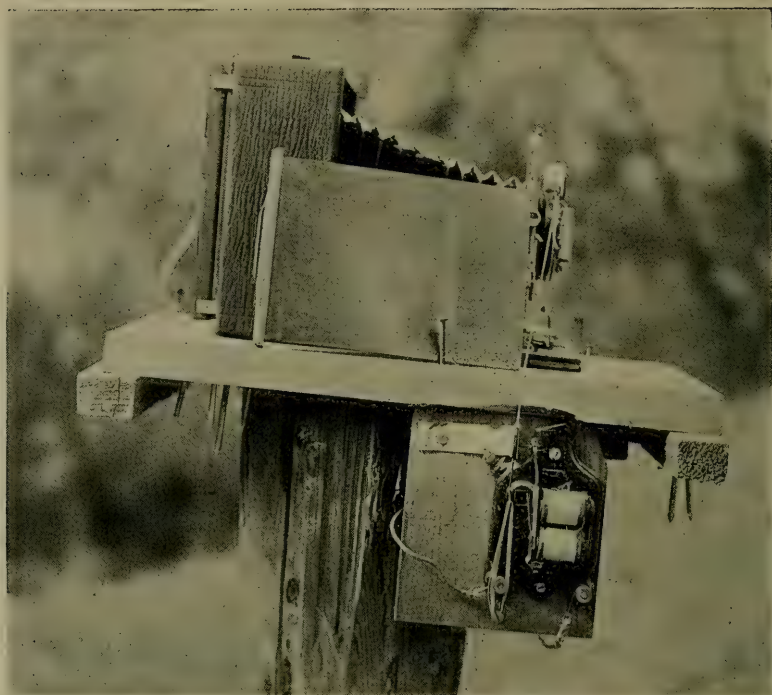
In the absence of such a shutter, I have substituted an ordinary electric bell, made over to serve the purpose. The only parts used are the electro-magnets, armature, and frame. The hammer is removed and the shaft bent at right angle to the armature. The wiring is changed so that the interrupter is cut out. Two pieces of sheet-zinc, two inches by three-fourths of an inch, are bent to form a right angle and soldered together at the base, leaving a three-sixteenth-inch space between the upright portions. A hole is bored in the outer zinc, to admit the end of the bent shaft which normally rests against the



TREE SWALLOW

second zinc. A piece of number eighteen copper wire, four inches long, is bent to form a loop. One end is fastened to strong thread that leads to the release, and the other end is fastened to rubber bands that are secured below. This apparatus should be fastened to a board, and the whole thing nailed to

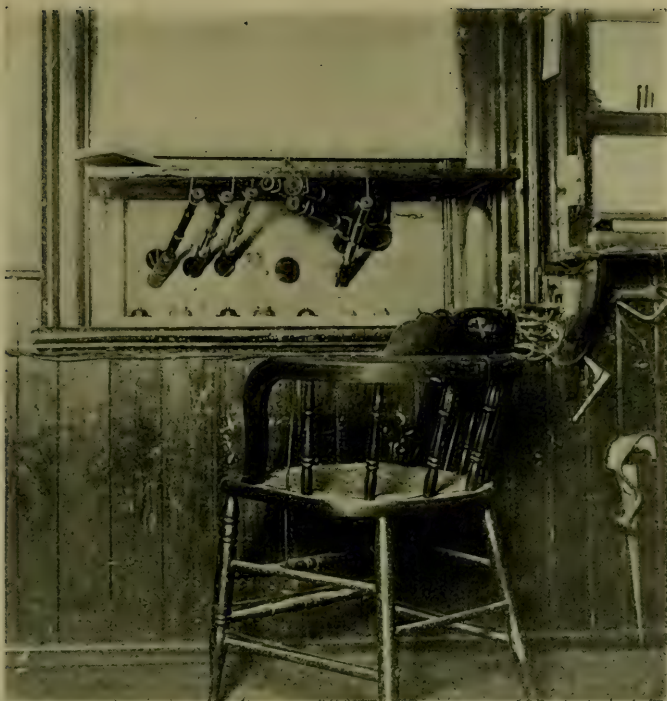
*During the past several years BIRD-LORE has published a number of unusual bird photographs by Mr. Guy A. Bailey. In this article Mr. Bailey describes some of his unique methods in bird photography and gives additional examples of his work.—ED.



CAMERA SHOWING ATTACHMENT OF ELECTRICAL RELEASE



A CAMERA BOX PLACED ON TOP OF AN OAK; A PHOTOGRAPHIC TRAP FOR HAWKS
AND OTHER HIGH PERCHING BIRDS OF THE OPEN



THE OBSERVATION ROOM, SHOWING TELESCOPES TRAINED ON FEEDING-STATIONS
OR PERCHING-PLACES, AND PUSH-BUTTONS CONNECTED
WITH ELECTRIC RELEASE ON CAMERAS



A VIEW OF FEEDING-STATIONS AND CAMERA-STANDS AT THE HEAD OF THE RAVINE

a support for the camera. The magnets should come directly under the shutter, so that the pull will come straight down. The wire loop is hung over the shaft and the rubbers drawn down tight and fastened. The thread should just reach from the wire to the release on the shutter. When the current is passed, the shaft will be drawn from the loop and the rubber bands will pull the wire down, instantly releasing the shutter.



HAIRY WOODPECKER

With this apparatus a bird may be snapped in any position it assumes. It acts instantly, and a speed of one fiftieth of a second will be fast enough for any that moves only at the stroke of the armature. In some cases a slower speed may be used. With a lens working at $f/4.5$, it is possible to get good negatives in cloudy weather and without motion, by setting the shutter for a slow-instantaneous exposure. It will require some time to find just the speed that is slightly faster than the reaction period of the bird.

At the present time, I have seven of these electrical releases, with all the necessary push-buttons in one window. Four of them are about one hundred feet from the window near feeding-stations. One is set near a tree into which a hole was bored and suet placed for Woodpeckers, Nuthatches, Chickadees, and Brown Creepers. These birds have been photographed many times, but the station is still kept up for them as well as for some uncommon bird that may come. There is a chance that the Red-breasted Nuthatch, Arctic Three-toed Woodpecker, or some other desirable stranger, may be the next visitor.

The second camera is placed near a horizontal limb bored out and nailed to a post. This limb is filled with various seeds such as hemp, millet, rape, and canary. Seed-eating birds will be attracted to this place. Among those that come to this particular station are Juncos, Song Sparrows, Towhees, Cow-

birds, White-throated Sparrows, White-crowned Sparrows, Chipping Sparrows, Swamp Sparrows and, most abundantly of all, English Sparrows. Ninety per cent of the seed put out are eaten by these pests. Still, I give them credit for leading the way. It is their noisy feeding that attracts any other bird within hearing. I do not find that they really keep the others away; for most of the others mentioned will eat with them. The Song Sparrow is more belligerent than the English Sparrow. I have seen a Song Sparrow drive away three English Sparrows, attacking them savagely. It is the usual thing for the English Sparrow to give way to the Song Sparrow.

A third feeding-station is a horizontal limb like the second, but mounted on gas-pipe, which is provided with a large funnel, to keep down the squirrels. The food used is crumbs of fried cakes, sunflower seeds, and other foods that the squirrels eat. The numerous gray squirrels are given plenty to eat, but we prefer that it come from some other place than here. Robins, Grackles, Scarlet Tanagers, and other birds, are fond of the doughnut crumbs; Goldfinches and Nuthatches eat the sunflower seeds.

A fourth feeding-place is near a stump in a ravine. The stick is bored out and a hole about two and a half inches deep by three inches long made. The sides are lined with copper, and the bottom covered with plaster of paris. In this are placed meal worms. The smooth sides prevent them from crawling out, and the white bottom makes them conspicuous to the birds. This is intended for Winter Wrens, Fox Sparrows, and Thrushes. It is always in the



PURPLE MARTIN



SONG SPARROW

shade. To make it possible to use a quick exposure, light is thrown from a large mirror, controlled from the window where the push-buttons are located.

The fifth feeding-station is in the middle of a pasture-lot about five hundred feet from the window. It is surrounded with a fence, to keep the cattle from disturbing the camera. The food used is seeds, crumbs, and meal worms.



WHITE-THROATED SPARROW
HOUSE SPARROW

SWAMP SPARROW

Meadowlarks, Sparrows, Crows, and Flickers have used this station so far. Other birds of the fields are expected in due time.

A sixth station is located about eight hundred feet away. A limb is driven into the ground. A hole is bored in the top and two other holes are bored in the side of the limb. The stick is three inches in diameter and extends about sixteen inches above the ground. English walnut meats are put in the hole in the top. Red-headed Woodpeckers are constant visitors when this food is used. Doughnuts and seeds are placed in the holes in the sides. Crows, Meadowlarks, Grackles, the various Sparrows, have already visited this station. It was set up for the purpose of attracting Pheasants, Quail, and those birds that keep away from the buildings. Of course, the other more familiar birds were to be expected.

The seventh circuit does not run to a feeding-station. The apparatus is placed in the top of an oak tree sixty feet from the ground. Three ladders permanently mounted in the tree make the ascent easy and rapid. The camera is focused on the end of the tallest limb in the tree, all others limbs near having been cut out. This tree has for years been the lookout for a great

variety of birds. Shrikes, Sparrow Hawks, Cowbirds, Bluebirds, Grackles, Grosbeaks, and many others, have perched in this tree, but thus far have been out of reach of a camera. This place has just been arranged, and no pictures have yet been taken.

The tree itself is not visible from the window and, to overcome this difficulty, a large fine mirror has been set up in the pasture lot. The mirror is set at the proper angle and, by focusing a telescope on the mirror, the top of the oak is watched. I should add that all the stations are covered with telescopes permanently mounted and focused on them. These telescopes are just over the push-buttons in the window. Even those that are one hundred feet away have telescopes, for at that distance it is necessary positively to identify the birds, and to be sure of their exact position before touching the button.



FEMALE BOBOLINK



RED-HEADED WOODPECKER
Taken with a \$12 camera

Seven years ago, I started a permanent feeding-station, using only suet for food and a string to release the shutter. From year to year the number has increased and the kinds of foods varied. I find it best to use certain foods regularly in the same station. There is more chance of getting the birds you want if you increase the number of feeding-places.

One might imagine that after two or three years few new subjects would offer themselves. On the contrary, each year of the seven has brought some new species. Earlier in the work there were more. In these seven years, Scarlet Tanagers came but one year; Towhees, one year; Swamp Sparrows, one year; Cowbirds, two years; Fox Sparrows, one year. Of course, there are many that come regularly each year, and that gives a chance to improve



A CROW FEEDING ON A DOUGHNUT AT FEEDING-STATION NO. 6

the pictures that were made previously. Then, there is that long list of migrants that may stop if you can get the right food, bath, or perch. These are the ones that keep you always hoping.

These feeding-stations, with the telescopes, give you an opportunity to study the birds when they are absolutely undisturbed by your presence. The boxes with the cameras become part of the landscape, and birds are not at all disturbed by them. Even the click of the release becomes, after a time, a familiar sound.

The four feeding-stations nearest the window have a favorable location by nature. Below them is a wooded ravine that opens out into a pasture lot. Birds moving from the lowlands for shelter would come to the stations. The English Sparrows are the decoys that lead them on. Above these stations there is a spring that is open the year round, and this draws many birds.

This ravine is located in the village of Geneseo, N. Y., near the Normal School building. There are residences close at hand. House cats roam through this ravine early in the morning and late in the afternoon. They, of course, catch many of the birds, and frighten others away. Some of them hide in the camera-boxes, and pounce on the birds from this vantage-point.

It is most unfortunate that we have no legislation against roaming cats. They are roaming, mostly because they are improperly cared for or insufficiently fed at home. It is common for people to own cats and let them "hunt for a living." It means often that they feed on birds.

It is entirely legal now to keep a cat that lives on song-birds. A large number of people are not keeping cats because they do feed on birds. If public sentiment continues to increase, the cats will be less numerous and the birds will have a better chance. Anyone who tries to feed the birds will find that the cats are a nuisance, and will be willing to aid in securing legislation to protect the birds from this their worst enemy.

The Song of the Philadelphia Vireo

By MRS. ELIZA F. MILLER, Bethel, Vermont

"**T**HAT is a Red-eyed Vireo singing, isn't it?" said a visiting friend, as we walked down the street near my home.

"I don't know," was my reply, "I begin to suspect that Vireo."

This was on June 16, 1912. The bird had been singing all day for weeks, and I too had thought it a Red-eye. But the voice was unusually sweet and there was a difference in the song that was quite pronounced, when once noticed. I listened intently many days, and at last decided to try to write it down. At the piano, it seemed to correspond with G G C E, rest, G C E, rest, F B; the G highest, the other two notes the next lower ones in the scale.

Of course, the bird's pitch was "way beyond the keyboard." Over and over, he sang these three phrases.

One might think, perhaps, that this is not very unlike the Red-eye's song; but the highest tones were emphasized and dwelt upon, instead of slighted, as is the way of the Red-eye, and there was the briefest of pauses between the high G and the C, every time. Sometimes, in an absent-minded way, he uttered the high G, or *tweet*, alone. Sometimes he was particularly emphatic on the second G of the first phrase.

Later, he often sang so much like a Warbling Vireo that I should have believed it to be one, only that he tacked his own peculiar song to the end; or else he sang his own, and finished with the Warbling Vireo song, and all in the same sweet tone. On comparing the song of the real Warbling Vireo with that of the new Vireo, a slight difference, difficult to describe, could be detected.

During these weeks of listening, I was trying hard; at every opportunity, to see the singer, but he kept in tall tree-tops usually. However, I had a few good looks, when he was perhaps twenty feet above me. He certainly might readily be confused with the Warbling Vireo as to appearance, as Reed's Bird Guide states. He had a very short, notched tail; no wing-bars, light line over eye; and the underparts usually looked white, but sometimes showed a faint lemon tinge. He had a way of standing still and giving his mind entirely to his music; but he was very quick in his gleanings, and sang as he gleaned. He was not heard after the middle of July. This is all that I learned that year.

I wrote to Mr. Harry Piper about this bird, and he directed me to Mr. William Brewster, of Cambridge, Mass. I described my bird to Mr. Brewster, and received this from him:

"Your description of the song fits very well that of the Philadelphia Vireo, which is closely like that of the Red-eye, but yet slightly different, being slower of delivery and less smoothly flowing, and having an occasional note or phrase more or less unlike any that the Red-eye uses. The simple 'tweet, very high and sweet,' is one of these notes, and you render it admirably. Another is a clear-ringing note, not unlike one that the Solitary Vireo gives. Some Philadelphia Vireos that I have studied could be quickly and certainly distinguished by one or another of these peculiarities of song. Others sang exactly like Red-eyes, so far as I could discern.

"In good lights, they usually look very yellow beneath; but this is not always the case, and I have seen some that looked no yellower than Red-eyes, while exceptionally small birds of the latter kind occasionally appear no larger than Philadelphia's. In other words, it is not always possible to make quite sure of a bird either by hearing or seeing him, unless he is very near and closely scrutinized. I am not sufficiently familiar with the fauna of your region to be able to judge if it is likely to include the Philadelphia Vireo as a summer resident, but everything you say inclines me to think that the bird you saw probably belonged to that species."

Much pleased with this encouragement to believe that what I had already hoped was true, I was eagerly listening again when spring came. On May 11, 1913, the first Red-eye announced himself, and, soon after, a Vireo, with the peculiarly sweet voice of my last year's bird, began to be heard on our street, not far from his old stand, but nearer to us. His emphasis and spacing were not like the bird's of last year, but rather more like a Red-eye's, except that every third phrase was different from anything that the Red-eye sings, —*weecher, weecher*,"—very rapid, downward inflection, second word higher than the first. Later in the season, this distinctive phrase came in only as fifth or sixth. But always there was the remarkable sweetness of tone.

I had some very fair looks at the bird, and he was like the one of 1912, in every point.

On May 25, I was out at 5.30 A.M., looking for this Vireo, and saw him

high in his chosen maple. I followed him around his small circle of trees, and saw that, as he sang, another small bird attacked him several times. At last he flew to a lower tree, where he was attacked again. The two birds fought and flew, falling into tall grass not far from me. They stayed so long that I stepped to see, when up they came, still fighting, and tried to alight in a low tree near me, but fell again, this time upon bare ground not three feet from where I stood. They did not heed me in the least. One at once stood very erect, and as still as though frozen. The other took a threatening attitude before it, with outstretched head and neck, and open beak, showing the scarlet interior of the mouth, and in a moment began to sway the head and body to right and left rigidly, still with open beak. I watched breathlessly. The first bird kept its upright posture, thus allowing me to observe the decided yellow of the breast, which was just what was needed to complete my satisfaction that this was a pair of Philadelphia Vireos, in a lovers' quarrel. The underparts of the other bird were hidden, but I knew it was the white-breasted singer of the song that was nearly like that of the Red-eye.

The birds were exactly alike above. The line over each eye was slightly yellow, and there was no black crown border, as in the Red-eye. The birds, always noticeably smaller than a Red-eye, looked more delicate than ever now, as their feathers were held close to the body.

After a long moment, the one that threatened flew away, and sang as soon as he touched the branch. The yellow-breasted one went in another direction, and silently.

The song was heard until near the end of June, almost constantly, though at the last less frequently; and the rests between phrases were longer, and sometimes only two phrases were repeated, one of them often having a liquid quality. I think that I heard it a few times in August, but am not positive, as I did not see the bird, which seemed to be at quite a distance.

On August 20, on our blackberry bushes, eating the fruit, were two tiny birds in close company, that at first I took for Warblers, but could not recognize them. It suddenly came to me that they must be Philadelphia Vireos, perhaps the young ones. They were softly yellow all below, a pretty greenish above, had a yellow line over each eye, and very short, notched tails. They really resembled the picture in the Revised Edition of Reed's Bird Guide more than either of the two seen on the ground, on May 25. Those first ones must have had the two extremes of color of the underparts.

I have given these particulars so minutely because I have rarely seen the Philadelphia Vireo named in Vermont bird-lists, and think that possibly some one may benefit by my experience. Mr. Brewster, in a second letter says: "Perhaps you will later find that this species is more commonly represented than you are now aware."

Impressions of the Voices of Tropical Birds

By LOUIS AGASSIZ FUERTES

Illustrated by the author

THIRD PAPER—ORIOLES, FLYCATCHERS, FINCHES, AND THRUSHES

A COMPARATIVE study of the notes and songs of the birds of the tropics and their familiar northern representatives is certainly not less interesting than the study of their physical resemblances and differences. And here it may be suggested that resemblances, which are of greatest value as showing relationships, are even more elusive and hard to follow out than are more physical characters. Differences are of negative importance; resemblances alone count in tracing racial affinities.

In this respect the great family of tropical Orioles hangs together as a unit, and ties closely to its more familiar northern offshoots. From the tiny Mexican Orchard Oriole to the crow-sized Oropendolas, there is some subtle quirk of tone that makes them all recognizable to anyone having a single good acquaintance in the family.

I think no birds in tropical America have given me more pure fun with their vocal performances than the big Yellowtails, or Oropendolas; *Gymnostinops* in southern Mexico, and the various species of *Ostinops* in Colombia. I cannot now remember any striking differences in their songs or calls, except that *Gymnostinops* combines more gymnastics with his effort than mere *Ostinops*. But everywhere in tropical America the loud rasps, chucks, and gurglings of these great Orioles are as characteristic as the steady flashing of black and gold in the burning sky, as they wing over head from bank to bank of the great rivers.

They are all highly polygamous, and I have frequently seen them demonstrate a most watchful and efficient warden-service in favor of the old males. After one shot, you may stalk and stalk the big black Sultan, "quisking" from the bare dead spike above the forest roof, only to be defeated, time after time, by the party of six or eight silent and watchful females perching around him at lower points. Silent, that is, until you get within about twice gunshot of their lord, when they suddenly squawk and yell, and the old boss "yips" loudly and, with batting wings, leaves for foreign parts.

The calls of the male, given from a high perch with a commanding view, may be variously described: a loud, vigorous "quisk,"—an equally carrying but very liquid "churg," ending inside an empty cask,—a series of dry, ascending clicks or twig-snaps, probably done with the enormously strong and hollowed bill. But his true song, to call it so, defies description or imitation without all the "traps" of the triangle-man in the orchestra. Imagine a performance lasting only about two seconds, commenced by breaking off a handful of willow sticks, then running into a rising series of "choog-choog-choogs," to end in a loud, explosive "keow," easily audible at a quarter of a mile. This

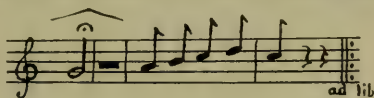
is only the vocal part of the performance, and it is accompanied by a contortion of which the Cowbird's spring effort gives a mild idea. The bird first looks down, ruffles the nape feathers and elevates the tail, and then, clattering the bill and emitting the other sounds that he alone is capable of, falls forward, clapping his wings lustily over his back, until he is under his perch, with his bill pointing directly up. Now he delivers his last explosive yell, wings and



MEXICAN OROPENDOLA—SINGING. (*Gymnostinops Montezuma*)

glorious tail all outspread to their utmost, and by means of his first foothold, not relinquished in his effort, and with wings folded, he draws himself back to his first position, where he sits ruffled for a minute or two. Then, depressing his feathers, he repeats his acrobatic song. The males are a full half larger than the females, and have enormously developed legs and feet, apparently for this performance, recalling a Raven's foot; while the females have the usual slender, Grackle-like feet of the family. One need never be bored when there is a colony of these striking and virile birds in the vicinity.

Some of the typical Orioles and Troupials have exceedingly brilliant, if monotonous, songs, and they are kept as pets in nearly every house in the towns or along the trails in Colombia. *Icterus mesomelas* nearly drove us insane with his piercing song in the hotel in Cali., repeating it incessantly from his cage at our door.



All Orioles are great singers of little tunes, usually going just enough off key to get on your nerves, and this is only one of hundreds of such little phrases. The Hooded Oriole group have a deliciously naive way of singing little "ear-less" tunes, like a small boy on his reluctant way to school, whistling himself along the road. This is the most companionable birdsong I know, and has frequently been real company to me, when hunting alone along the banks of tropical rivers and in the foothills.

It would be impossible here to take up more than a few of the striking types of this large family of brilliant singers, but it would certainly be doing the whole group an injustice not to mention the wonderful silver and golden songs of one of the black offshoots of the family, *Dives dives* of Yucatan. This glossy beauty was very common at Chichen-Itza, and was a source of constant marvel from the variety, richness, and volume of its notes. I cannot describe them, nor even remember them concretely, but I was at once reminded of the Pastor Bird I had once heard in the Philadelphia Zoo. It had all the deep-throated richness of the best Oriole songs, combined with a sweetness more Thrush-like and of infinite variation. Among all the varied and rich songs about the place—Wrens, Orioles and Thrushes—on my first morning afield in the continental tropics, *Dives* made the one deep and lasting impression above all others, in the classic and thrilling surroundings of the ruined Maya city.

While Orioles are always within hearing, I think that doubtless the most pervasive and ever-present sounds in the tropics come from the even larger family of Flycatchers. From the blue, lonesome, plaintive little "pew" of *Myiarchus l. platyrhynchus* and the equally despondent sighs of some of the *Elainias*, to the executive "yips" of the Big-billed and Derby Flycatchers,



DERBY FLYCATCHER
(*Pitangus sulphuratus derbianus*)

these characteristic sounds are ever in the ear. So far as I know, only one Flycatcher can really be proclaimed as a singer, with a real song different from his ordinary calls and scolds. This one exception is no less distinguished by his coat from the rest of the rather somber-colored family. The gorgeous little Vermilion Flycatcher has a simple but very sweet song; lispy and thin, but delivered with great devotion. Darting like a flame up into the flood of sunlight, he reaches a point about a hundred feet from earth, and then, with scarlet crest spread out like a hussar's hood and head thrown back,

he floats lightly down on trembling wings, lisping in ecstasy his poor, sweet little song, *Cirivi' cirivi' cirivi'*. It is hardly noticeable, even among the little Finch twitters along the roadside, but for a Flycatcher it is remarkable; and surely no gifted Thrush or Lark ever went to his matins more devoutly. It is a strange contrast to the usual Flycatcher utterances, which are loud, raspy, egotistic, and highly commandeering. Our Kingbird is a fair example of the family, with the Greatcrest as a good amplifier of the impression. It

is the forest Flycatchers, like the Wood Pewee and some of the *Elainias*, that have the lost-soul, hollow-hearted plaints; the sun-loving kinds are very kings of earth in their noisy self-confidence.

The Finches and Sparrows in general do not add much to the tropical mélange of bird-music. They are frequently birds of great beauty, and all have some blithe little song, "finchy," and characteristic of each species. However, to a Sparrow falls the distinction of being the most widely distributed singer we encountered in South America. It is safe to say that anywhere in the Andes above two thousand feet, from the Pacific to the Orinoco slope, the little Andean White-throat, *Crachyspiza*, will cheer the traveler with his brief and pleasant piping. "It is sweet cheer, here," gives the phrase and accent. It is more like an abbreviated Fox Sparrow song than anything I can recall. I shall always feel a personal debt to its cheery optimism, as it sang daily in the court of the hotel in Bogotá, in the clammy chill of the damp days, nine thousand feet above sea, while I was fighting through the fever contracted in the lowlands. He gave my scrambled and fevered brains the one tangible hold I had with the wonderful world outside, and it recalled nearly all of our associations in South America.

Some of the roadside Finches and Grassquits have curious and explosive little buzzy sounds. *Volatinia*, a raven-black mite living along the hedge-rows, has an amusing song-habit. Sitting on the top of a grass or weedstalk, he suddenly rises in bee-like flight about a yard into the air: at the apex of his little spring he turns a rapid somersault, with a volatile "Bzt," and drops back to his perch. The whole effort takes perhaps a second!

Most of the Tanagers, which grade insensibly into the Finches, are not much when it comes to singing. However, the larger *Saltators* have clear, whistled songs that are highly characteristic. They are leisurely soprano songs, usually heard from thickets of soft growth on the mountain-sides. One song heard in the Eastern Andes that I ascribed to *S. atripennis*, though I could never quite satisfactorily prove the singer, was as loud, pure, and wide-ranged a song as I have heard. Though quite complicated, it was always identically the same in form and range. Two long descending slurs, one ascending, a long



ANDEAN WHITE-THROAT
(*Crachyspiza capensis*)

descending trill, then a descending run in couplets (like a Cañon Wren), a rising slur, and a final short trill on a high note. In many songs, heard in several localities, this scheme was closely followed. The mountain forests of the tropics furnish an endless and enchanting field for this kind of study, which our hasty survey and limited time unavoidably rendered all too superficial and fragmentary.

We found, as a rule, that the gemlike Tanagers of *Calospiza*, *Chlorochrysa*, etc., were nearly devoid of song. Their drifting flocks, sifting along through the tree-ferns and higher levels of the forest, were much like a flock of migrating Warblers, always made up of several species, and their little lisping sounds were further reminders of our northern tree-gleaners.

The Cotingas, as a rule, were silent, though some of the more Fly-catcher-like, such as *Tytyra*, have loud, buzzy calls, and the big ones, like *Pyroderus* and *Querula*, have deep, pervasive vocal sounds hard to describe, but fairly easy to imitate. The tiny and gorgeous Manikins all make loud, staccato "pips," out of all proportion to their diminutive size.

The Thrushes, however, are quite as satisfactory singers in the tropics as they are in New England. The Robin group, *Planesticus*, is large and varied from Mexico south, and we had many chances to study and compare them in song and actions.

P. gigas, of the Andes of Colombia, considerably bigger than a Blue

Jay, and solid dusky but for his corn-colored bill, feet, and eyelids, had a disappointingly weak and squealy song. Members of the *tristis* group, however, are to me the finest singers of the whole genus, trilling, piping and warbling with the greatest abandon and purity of tone. They are shy singers, and rarely to be heard except after long silence in one spot. *P. jamaicensis*, heard with a divine accompaniment of Solitaires, lost nothing of its beauty by the comparison. The related genus *Melanotis*, the "blue mockers," are accomplished and brilliant singers, with much of the well-known quality of all Mockingbirds. But they rank very high, as do the members of the interesting Antillean group, *Mimocichla*. I shall never forget a concert I once heard on New Province, in the Bahamas. We were out in the "coppet," or woods, collecting, in the afternoon. About four o'clock a drenching thunderstorm broke,



BAHAMAN THRUSH
(*Mimocichla bahamensis*)

and for an hour we were subjected to as thorough a wetting as could be desired, and most of our efforts went toward keeping our specimens from getting soaked. After a time, however, it stopped almost as suddenly as it had begun, and through the breaking sky the level rays of a declining sun reddened the straight columns of the pines and glistened from the wet and shining foliage of the broad-leaved trees. Suddenly, and so Robin-like that I was for a moment quite moved, there commenced a chorus of delicious and brilliant singing that I have no similar recollection of. It was from the "Blue Thrasher," *Mimocichla plumbea*, and for a few breathless moments we were carried into an enchanted realm that it is still a joy to remember. The music was no less scintillating than its clean and glistening setting.

It is perhaps too bad, and a sign of limitation that we should hesitate to admit, that the songs that please us most are apt to be those that perfect or glorify songs we already know at home. It may even not be true; but I think, nevertheless, that no birdsongs have ever given me a more welcome turn of heart than some of these tropical Thrushes, which carry farther the lovely qualities of intonation so richly present in our Hermit Thrush's song. The group known as *Catharus*, true Thrushes, haunt the moist, ferny mountain forests, and from the quiet fragrance of these silent places come the exquisite silvery bell-tones of their songs. They sing from the ground or very near it, and never have I heard them lift their voices high. But their tone is more pure, their delivery more perfect, and their chaste cadences more prismatic and rich, than those of any other Thrush I know, and I should find it hard to pick the slightest rift within the lute. It is upon these tender, ineffably sweet flutings that I base my concept of a perfect bird-song.

THE SONG SPARROW

Before the purple crocus dares to fling
 The snow aside, and bare its golden heart,
 Before the boldest bee has found a mart,
 Or flecked with pollen rich his veined wing,
 There comes a wistful voice, thrilled through with spring,
 And joy, and hope, and quaint unconscious art,
 As though an angel, doubtful of his part,
 Should lift beseeching eyes, and pray, and sing.
 The frost's white fret-work lingers on the pane,
 And hunger makes the startled rabbit bold;
 But not scant fare, nor winter's latest sting,
 Can silence this brown minstrel's dauntless strain.
 Supreme in faith, as in his voice of gold,
 The truest-hearted lover of the spring. —LAURA F. BEALL.

Some Ways of the Oregon Towhee

By MRS. STEPHEN E. THAYER, Everett, Wash.

With photographs by the author

THE Oregon Towhee is a permanent resident of western Washington. It frequents the half-cleared country about the farms, and the suburbs of the cities, where a morning's walk at any season of the year is sure to be rewarded by the sight of two or three of these handsome birds. Their plumage of black, cinnamon-red, and white, renders them conspicuous objects in the landscape, even on the dullest days. They are to be seen about the fences and brush-piles, or passing in low, graceful flight from cover to cover, or feeding on the ground in protected places, usually singly, though sometimes in pairs, and rarely in companies of three. When feeding, the Towhee



MALE OREGON TOWHEE FEEDING YOUNG

Note the comparative inconspicuousness of the young bird

scratches so energetically that the debris is scattered in every direction, and he is so intent upon his work that, with care, one may approach near enough to see with a glass the uncanny red eye. At the slightest alarm, he slips into a thicket, and remains so completely hidden that only the tremble of a branch betrays his presence. Only during the mating season is a favorable opportunity afforded to observe him at leisure in the open. Then he perches on the topmost twig of a shrub or low tree, and sings untiringly. At its best, the song is a clear trill, introduced by a rather prolonged low note, *To-who-e-e*, with much emphasis on the trill. Often the first note is omitted, when the trill

begins with an explosive effect, *Ch-e-e-e*, and is much less musical. When disturbed, the singer dives head foremost into the brush, and protests in an angry *Hey!* or *G'way!* This note is capable of much modulation, being at times quite gay and cheerful, at others harsh and querulous.

Unlike most members of the sparrow family, the Towhee is unsocial in his habits. He lurks in the dusky shadows of the undergrowth, showing little



MALE OREGON TOWHEE

interest in others of his kind, excepting at nesting-time. Even at that time, the male apparently tolerates rather than enjoys the presence of the female. We have watched them for a number of years at our lunch-counter and, so far as we have seen, he never allows her to feed with him, excepting when both are busy carrying grain to their young. At that time, he is probably too much occupied with his share of the domestic duties to pay much attention to her.

Though naturally shy and suspicious, the Towhees seem to appreciate the advantages to be derived from the neighborhood of man. They soon learn to feed about the outbuildings and chicken-yards. Our lunch-counter, which is within a few feet of the dwelling, is freely patronized by them. The dwelling, however, is most favorably situated on the edge of the city, with plenty of shrubbery for cover, and no near neighbors. If food is not in evidence on their arrival in the early morning, they remain in the neighborhood, calling their insistent *H-e-y!* until they are fed. We so won the confidence of one pair that we could call them to us at almost any time. In response to our "Come on! come on!" we would hear their eager *H-e-y!* at first far away, then nearer and nearer, until they appeared, more than ready for their food.

At the lunch-counter, the female is composed, even dignified in manner, feeding quietly until satisfied. The male, on the other hand, is nervous and self-conscious, as if quite aware that his more brilliant plumage increases his dangers. He fidgets under cover of the brush-pile provided for his benefit, until his hunger gets the better of his caution. Then he slips out, snatches, a hurried morsel or two, seizes a big kernel and retires with it to the friendly shelter, where he devours it at his leisure, and gathers courage for another sally. On very dark days he is able to feed more comfortably. The young birds are brought to the lunch-counter and fed there until they are able to help themselves. Often, in August, the young of two broods appear together. Those of the first brood are easily distinguished, as by this time they have begun to change their streaked brown plumage for that of the mature birds. The change shows first on the lower parts, where a few black, white, or red feathers mingle haphazard with the brown, giving the bird a peculiar mottled appearance, quite disreputable for a Towhee. At these family gatherings the female feeds the young of either brood indiscriminately, but the male not only refuses to feed those of the older brood, but will not allow them to feed while he is present. If they venture to approach, he promptly gives chase, and the young birds retire to a safe distance, to await the departure of their unfriendly parent.



MEADOWLARK

An admirable study in pattern of coloration showing how the margins of the feathers tend to make continuous white lines

Photographed by Guy A. Bailey

The Migration of North American Sparrows

TWENTY-SEVENTH PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

(See Frontispiece)

CALIFORNIA PURPLE FINCH

This bird is the western representative of the Purple Finch, treated in the last issue of BIRD-LORE. The eastern form, (*purpureus*) extends west to the Plains; while the subspecies, known as the California Purple Finch (*Californicus*) is confined, for the most part, to the Pacific slope, and is separated in the United States from the range of the eastern bird by the whole chain of the Rocky Mountains, in which neither form occurs. In Canada, however, the range of the eastern forms bends westward and extends at least to Stuart Lake, B. C., thus intergrading in central British Columbia with the California Purple Finch, which is a common bird of southern British Columbia.

The latter form breeds over much of California, and moves south, in the fall, to the extreme southern part of the state. The first arrival was seen at Mount Whitney, October 10, 1875; Dunlap, October 26, 1890; Santa Barbara, October 29, 1910; Pasadena, October 27, 1896; Los Angeles, October 31, 1908; and Santa Catalina Mills, Ariz., November 11, 1885.

The birds remained at this last place until February 9, 1886, and were seen at Fort Verde, Ariz., until March 25, 1886; at Los Angeles, Calif., to March 25, 1908, and at Pasadena to April 29, 1896.

A few winter so far north that they were noted at Fort Vancouver, Wash., January 18, 1854; and at Chilliwack, B. C., January 28, 1889. As with the eastern form, the presence of these scattering winter birds makes it impossible to tell when spring migration really begins. Some dates of the first seen are: Fort Klamath, Ore., March 1, 1887; Portland, Ore., March 10, 1897, and February 27, 1900; Beaverton, Ore., March 6, 1884, and February 20, 1885; Sumas, B. C., March 7, 1905, and Burrard Inlet, B. C., April 4, 1885.

CASSIN'S PURPLE FINCH

Breeding south to southern California, central Utah, and southern Colorado, the Cassin's Purple Finch has few migration records south of the regular breeding range, while a few birds wintering north to Colorado and northern California interfere with the determination of the dates of spring migration. The first appeared at Willis, N. M., August 26, 1883; Mogollon Mountains, Ariz., October 6, 1884; and Fort Whipple, Ariz., October 21, 1864. The last was noted at Albuquerque, N. M., November 15, 1853; and near Zuni, N. H., November 20, 1873.

The first spring migrant was seen at Tucson, Ariz., February 19, 1886;

Camp Burgwyn, N. M., March 14, 1859; Denver, Colo., February 26, 1885; Rathdrum, Idaho, March 24, 1906, and March 7, 1908; Columbia Falls, Mont., April 4, 1894, and April 5, 1897; Carson City, Nev., March 21, 1868, and March 27, 1900; Fort Klamath, Ore., April 1, 1887; Anthony, Ore., April 1, 1906; Pullman, Wash., March 31, 1910; Cheney, Wash., April 8, 1905; Okanagan Landing, B. C., March 8, 1906, and March 13, 1910.

Migrants have been seen at Camp Burgwyn, N. M., as late as May 24, 1858; Fort Lyon, Colo., May 28, 1886; Fort Whipple, Ariz., May 12, 1865; Fort Verde, Ariz., May 10, 1888; Huachuca Mountains, Ariz., May 11, 1903; and Los Angeles, Calif., April 26, 1901.

HOUSE FINCH

The House Finch, or 'Linnet,' as it is best known in California, is a non-migratory species of the western United States, ranging north to Oregon, Idaho, and Wyoming, and south to Mexico; it is abundant east to the eastern foothills of the Rocky Mountains and less common to western Kansas and middle Texas. It has been separated into several subspecies, and the above is the range of the most common form *frontalis*. The San Lucas House Finch, *ruberrimus*, occupies the southern half of Lower California, while the San Clemente House Finch, *clementis*, occupies the islands off the coasts of southern California and northern Lower California.

Two other species of House Finch occur in Lower California. The Guadalupe House Finch lives on the island from which it derives its name, and McGregor's House Finch occurs on San Benito Island. All these species and subspecies of the House Finch are non-migratory.



Notes on the Plumage of North American Sparrows

TWENTY-SIXTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Cassin's Purple Finch (*Carpodacus cassini*, Figs. 1 and 2). This western species resembles the Purple Finch, but is somewhat larger and has the bill slightly longer and more regularly conical—that is, less bulbous at the base. In color, the male is paler than the male of the Purple Finch, particularly on the underparts, the back is more broadly and heavily streaked, and the red of the crown appears as a more or less well defined cap. Between the females of the two species the differences in plumage are less apparent, but in Cassin's the streaks on the underparts are darker and much more distinct.

The plumage changes of Cassin's Finch appear to be the same as those of the Purple Finch. That is, the juvenal or nestling plumage resembles in pattern and color the succeeding or first winter plumage, in which the male cannot be surely distinguished from the female.

This plumage is worn during the first breeding season, at the end of which it is lost by post-nuptial molt, and the pink plumage of maturity is acquired.

There is no spring molt, and the differences in the appearance of summer and winter birds are due to wear which makes females and young males look more sharply streaked, while adult males, as was explained under the Purple Finch in BIRD-LORE for February, seem brighter.

House Finch (*Carpodacus mexicanus frontalis*, Figs. 5 and 6). The House Finch, or 'Linnet,' is one of the commonest birds of the western United States, and lives even in large cities, where, in places, it is as familiar as the House Sparrow. Its differences from the Purple Finch are clearly shown by Mr. Fuertes' plates, and need not be dwelt on here. The plumage changes appear to be the same as those of the Purple Finch, but the differences between summer and winter plumage are more pronounced than in that species, the red areas in the adult male being much deeper and brighter in summer than in winter.

This member of the genus *Carpodacus* is responsive to the influences of its environment, and hence shows more or less geographic variation which has resulted in the recognition of several geographic races or subspecies. Three of these are confined to Mexico, and five are found within the limits covered by the 'Check-List' of the American Ornithologists' Union. They are (1) the House Finch of the western United States, mentioned above, and figured in the frontispiece; (2) the San Lucas House Finch (*Carpodacus mexicanus ruberrimus*), of Lower California; (3) the San Clemente House Finch (*Carpodacus mexicanus clementis*), of certain islands off the coast of California from Santa Barbara southward; (4) Guadalupe House (*Carpodacus amplus*, Figs. 2 and 3), of Guadalupe Island; and (5) McGregor's House Finch, of San Benito Island.

Bird-Lore's Advisory Council

WITH some slight alterations, we reprint below the names and addresses of the ornithologists forming BIRD-LORE's 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with the objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the fourteen years that it has been in operation fully equals our expectations; and from both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, Biological Survey, Dept. of Agr., Washington, D. C.
ARIZONA.—Harriet I. Thornber, Tucson, Ariz.
CALIFORNIA.—Joseph Grinnell, University of California, Berkeley, Cal.
CALIFORNIA.—Walter K. Fisher, Palo Alto, Cal.
COLORADO.—Dr. W. H. Bergtold, 1460 Clayton Ave., Denver, Colo.
CONNECTICUT.—J. H. Sage, Portland, Conn.
DELAWARE.—S. N. Rhoads, Haddonfield, N. J.
DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l. Mus., Washington, D. C.
FLORIDA.—Frank M. Chapman, American Museum Natural History, New York City.
FLORIDA, Western.—R. W. Williams, Jr., Talahassee, Fla.
GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.
ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
INDIAN TERRITORY.—Prof. W. W. Cooke, Biological Survey, Washington, D. C.
IOWA.—C. R. Keyes, Mt. Vernon, Ia.
KANSAS.—University of Kansas, Lawrence, Kan.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
MAINE.—A. H. Norton, Society of Natural History, Portland, Me.
MASSACHUSETTS.—William Brewster, Cambridge, Mass.
MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth Avenue South, Minneapolis, Minn.
MISSISSIPPI.—Andrew Allison, Ellisville, Miss.
MISSOURI.—O. Widmann, 5105 Morgan St., St. Louis, Mo.
MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.

- NEBRASKA.—Dr. R. H. Walcott, University of Nebraska, Lincoln, Neb.
 NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW HAMPSHIRE.—Dr. G. M. Allen, Boston Soc. Nat. Hist., Boston.
 NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, N. Y. City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Washington, D. C.
 NEW YORK, Northern.—Egbert Bagge, 191 Genesee Street, Utica, N. Y.
 NEW YORK, Western.—E. H. Eaton, Hobart College, Geneva, N. Y.
 NORTH DAKOTA.—Prof. O. G. Libby, University, N. D.
 NORTH CAROLINA.—Prof. T. G. Pearson, 1974 Broadway, New York City.
 OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 OREGON.—W. L. Finley, Milwaukee, Ore.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburgh, Pa.
 RHODE ISLAND.—H. S. Hathaway, Box 1466, Providence, R. I.
 SOUTH CAROLINA.—Dr. P. M. Rea, Charleston Museum, Charleston, S. C.
 TEXAS.—H. P. Attwater, Houston, Tex.
 UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
 VERMONT.—Prof. G. H. Perkins, Burlington, Vt.
 VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WASHINGTON.—Samuel F. Rathburn, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.

CANADA

- ALBERTA.—G. F. Dippie, Calgary, Alta.
 BRITISH COLUMBIA, Western.—Francis Kermode, Provincial Museum, Victoria, B. C.
 BRITISH COLUMBIA, Eastern.—Allan Brooks, Okanagan Landing, B. C.
 MANITOBA.—Ernest Thompson Seton, Greenwich, Conn.
 NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—W. E. Saunders, London, Ont.
 QUEBEC.—E. D. Wintle, 189 St. James Street, Montreal, Canada.

MEXICO

- E. W. Nelson, Biological Survey, Department of Agriculture, Washington, D. C.

WEST INDIES

- C. B. Cory, Field Museum, Chicago, Ill.

GREAT BRITAIN

- Clinton G. Abbott, 153 West 73d St., New York City, N. Y.

Notes from Field and Study

Red Bird Days

For some three years, six congenial friends—all lovers of God's great big out-of-doors—have spent some hours each week in field and wood, at delightful study and observation of bird-life in and about our beautiful little city of Fairmont, located near the Iowa line, in south-central Minnesota. Our lakes are numerous, and many of them are lined with native groves of oak, elm, basswood, hackberry, ash, poplar, black walnut, and a few red cedar trees. The underbrush consists, for the most part, of wild gooseberry, hazel, sumac, elderberry, thorn-apple, and a few wild currant bushes and plum trees. With water, woods, and prairie so closely associated, and all so generously distributed throughout the county, birds of all the three groups, water, woods, and prairie, find conditions favorable for domestic activities. This brings "to our very door" all the species naturally found in this latitude, and also occasionally a stranger from distant parts, far removed from home and kin.

While the male members of the sextette were out for a Christmas Census, a few days after December 25, one of them, Dr. T. P. Hagerty, observed a flutter of red in some willows ten rods ahead of us. The doctor became excited at the sight of the unusual bird and gave vent to a series of wild yells. His companions, somewhat shocked at the doctor's antics, remarked that "seeing red" was common experience with some folk, but for a man of his habits was rather strange. They spoke to him soothingly and cautioned him against the dangers of apoplexy from such uncontrolled excitement.

All three advanced a few steps when, suddenly, another series of yells broke upon the stillness of the quiet afternoon. This time it was Dr. Luedtke, who "saw red" with the above consequences. Mr. Sprague, who was on the other side of

the hedge, saw the form of the disappearing bird, but could not see the color, so his mental poise remained unchallenged. All sorts of derogatory accusations and charges were hurled at the two doctors. The very next week the three visited the same spot, and this time John Sprague also "saw red," and yelled as the others had done. The word "yell" may not be the best or most elegant English, but it is the only word that expresses what actually took place.

On our way home from our "Census" walk, we deliberated at length as to what the bird we saw might be, and finally concluded to report him as an American Crossbill; although we were not satisfied with that classification, for he seemed too large and altogether too brilliant and too wild. The next week, about the middle of January, 1914, Dr. Hagerty and John Sprague saw our new friend again, and this time discovered a distinct crest on his head. He was too far away to note other markings distinctly. The two declared it to be a Cardinal. The boys were somewhat piqued because the rest of the "family" did not accept their diagnosis as final and without question, but they hid their feelings, expecting that time would vindicate their position. A few days later, Dr. Luedtke received a telephone call from Mrs. John Lowe, who lives in the bit of wood where the red bird had been seen. She too had "seen red," and the echo of the characteristic yells were still sufficiently strong to be detected by the doctor's listening ears, so that he knew what had happened. In a rather excited tone Mrs. Lowe told of seeing "the most wonderful bird" right near her house, from one of the upstairs' windows. It was fiery red all over, and had a crest and a black throat, and she wished to know what it was. That practically settled the identity, but, being of a conservative nature, we some of us postponed positive opinion until the bird was actually observed by our own eyes.

The next time, Mrs. Luedtke accompanied the trio of male members to the red bird's haunts. It was a beautiful afternoon during the latter part of January. The ground was covered with four inches of new, white snow. The air was still, fresh and warm, with the sun shining most of the time. We were separated some sixty rods at the extreme, straining every nerve to locate the object of our tramp. At last! The very thing we hoped and wished for happened. A series of yells from Mrs. Luedtke told more graphically than word, pen, or picture, to the three of us with experience (although we were many rods away), that the red bird had been sighted. We are not sure whether it was the presence of the lady or the increased confidence in us because of former visits, but this day the red bird let us all come to within four rods of him. With our glasses all focused upon him simultaneously, we looked and looked to our heart's content, at the brilliant plumage, the strong pink bill, the fiery, tall crest, and the black throat and black circle about the bill. The aristocratic Cardinal! A few times he seemed to talk to us in sweet, low monosyllables. Of course, we did not expect him to sing at this season, but hope to hear him next May. We have looked for his mate, but so far have seen nothing of her.

Mrs. Hagerty and Mrs. Sprague have been with us a number of times, but each time we were unable to find the red bird. They enjoy talking to us about hallucinations and delusions and all sorts of mental disturbances,—even "brain storms." We listen serenely, and patiently await their turn at vocal demonstrations.

Just how or why the Cardinal came to southern Minnesota to spend the winter is a mystery to us. Why he should locate where he did, after once here, is not so hard to explain. A field of unhusked sweet corn, adjoining the heaviest wooded strip of land on the east shore of Hall and Budd Lakes, is reason enough. In the woods are many planted cedars and evergreens of various kinds. This makes as

good a shelter as can well be provided by nature in this climate.

Our January was a very mild one, but last week one night the mercury went to 18 degrees below zero, and we were greatly concerned about our Cardinal. Much to our joy, we found him last Sunday afternoon, February 7, in one of the densest cedars, very much alive and seemingly very contented.—DR. and MRS. T. P. HAGERTY, MR. and MRS. J. H. SPRAGUE, and DR. and MRS. G. H. LUEDTKE, February 11, 1914, *Fairmont, Minnesota*.

Bird Notes from Kennett Square, Pa.

Having been a regular subscriber to BIRD-LORE since 1907, and having enjoyed reading the contributions from various subscribers, I think it is my duty to contribute a few notes and observations from this section of Chester County, Pa.

(1) The first Starlings observed in the vicinity of Kennett Square, in southeastern Chester County, were observed by me on the afternoon of March 8, 1913. Two of them were on the steeple of a church, and were identified and closely observed through bird-glasses. Although they were about seventy-five feet from the ground, their notes could be heard plainly, and consisted of various short medleys resembling the song of the Yellow-breasted Chat. While the birds were under my observation, I heard one utter a short collection of notes which sounded exactly like the notes of a Guinea-hen. Another song sounded like that of a Red-winged Blackbird, and, from what I could hear of its various songs, I concluded that the Starling is a mimic, like the Mockingbird and Chat. The Starlings are now regular inhabitants of the steeple, although I have not seen them elsewhere.

(2) On December 11, 1913, I was given an Acadian or Saw-whet Owl, which had been taken from a cat that had killed it that day. As this Owl is a rather rare visitor to this section, this note may be interesting to any reader of BIRD-LORE who lives in this part of Chester County.

(3) For several years a partially albino Robin has nested near the public school in this town. The wings and head of this bird are gray, sprinkled with white, and the tail is black, or dark gray. The breast and back and other parts are pure white. As it nests in the same tree every year, it furnishes some proof that birds return to the same place to nest every year. I have observed this bird and its nest closely, and find that not one of the young inherits the albinistic character of its parent. I think the bird is a female.

(4) On January 11 of the present year I was watching a White-breasted Nuthatch eating suet which I had placed on a maple tree in our yard. He seemed to be enjoying himself, when suddenly two Sparrows flew to the suet and began to eat. The Nuthatch immediately left the suet and flew to the ground, where it hopped around for nearly five minutes and kept picking at seeds in the grass. While on the ground it hopped like a Sparrow. As a Nuthatch alighting on the ground was a new occurrence to me, I observed its actions closely. Is this habit of ground-feeding a rare habit, or just something which I have overlooked?—C. AUBREY THOMAS, *Kennett Square, Chester County, Pennsylvania.*

Notes from Ohio

The following records on the rarer birds noted during the year of 1913, may be of interest to Ohio readers:

1. *Holbøll's Grebe*. Jan. 30 and May 11.
2. *Baird's Sandpiper*. April 25, July 27, until late Sept. in small numbers.
3. *Black-bellied Plover*. Two, Aug. 24 on tract of Lake Erie.
4. *Turnstone*. One, Sept. 14. Beach of Lake Erie. Allowed a close approach.
5. *Barn Owl*. A specimen was found dead in the woods this winter. It has been mounted by a local collector.
6. *Evening Grosbeak*. A single bird the morning of Jan. 6, 1914.
7. *Backman's Sparrow*. Sept. 22. First observed in Sept., 1909, and have seen them in same locality each year since.

8. *Prothonotary Warbler*. One, May 4.

9. *Sycamore Warbler*. One, May 18.

—E. A. DOOLITTLE, *Painesville, Lake County, Ohio.*

Notes on the Black-crowned Night Heron and Other Birds at Orient, L. I.

On Gid's Island, a low, isolated patch of mixed woods, entirely surrounded by broad salt marshes and protected from common trespassing by wide, muddy drains, a new Black-crowned Night Heron heronry has become established.

There are no records of these Herons ever nesting at Orient prior to 1912, although they are common non-breeding summer residents about our marshes and shores, where they come daily and nightly to feed from the great rookery at Gardiner's Island, ten miles distant.

This station at Orient was visited in 1911, and no nesting was in evidence. In 1912 it was not examined. June 1913, I again visited the locality, and discovered a colony of nine pairs.

In addition to the nine occupied nests there were three nests not in use that season that had been constructed the previous year.

It will be observed that the heronry was originally started in 1912 with at least three nests, and increased the second season to nine.

Cedar trees appeared to be a favorite building-site, as these were selected for each nest.

The young at that time (June 22) were ranging from just hatched to nearly full-grown, and were fed on algæ, identified as *Agardhiella gracilaria* and similar forms, which abound in the shallow water near at hand.

In addition to the Night Heron's, the small collection of trees contained in breeding species four pairs of Green Herons, five pairs of Ospreys, one each of Catbird, Red-eyed Vireo, Yellow Warbler, Kingbird, Spotted Sandpiper, and Chickadee. The encircling salt meadows were inhabited by hundreds of Sharp-

tailed Sparrows and numerous Meadow-larks. In piles along the channel, at the edge of the bay, Tree Swallows were nesting in company with Flickers and Starlings. Here the Fish Hawks erected their nests right on the fishing-grounds, where their offspring lie on the floor of their home staring at the blackfish, cunners, and snappers, swimming in the clear water below.

In the vicinity of the interesting Island a pair of Clapper Rails were nesting. Although common in the western sections of Long Island, they are extremely rare toward the eastern end, and this is the first record of their breeding near Orient.—ROY LATHAM, *Orient, L. I.*

A Problem in Food-Supply and Distribution

During the winter of 1912-13, the spruces of Nova Scotia bore an abundant crop of cones, well filled with seed. As a consequence, Red-breasted Nuthatches were very common throughout the province during the winter, an unusual condition. Crossbills were likewise abundant, occurring often in large flocks, some of which must have contained as many as five or six hundred individuals. This winter, I have but once seen Red-breasted Nuthatches, a pair being observed on January 24, and Crossbills are also comparatively very scarce. This condition prevails throughout Nova Scotia, and, when we examine the conifers, we find, as we should expect, that the crop of seed is very light. So far all is plain enough. I had supposed that the majority of the above species, depending largely on the seeds of coniferous trees for food, had migrated southward during the autumn, and were now in the New England and Middle Atlantic states. On looking over the results of the last Christmas bird census, as published in BIRD-LORE for February of this year, I find, however, that this supposition is apparently only very partially correct. In North America east of the Alleghanies, Crossbills and Red-breasted Nuthatches are reported

practically from the State of Massachusetts alone, and from the rest of the country the reports of them are very few and far between. Presumably the conifers of Massachusetts bore a good crop of seed this winter. But are the great majority of the Crossbills and Red-breasted Nuthatches of eastern North America crowded within the confines of Massachusetts? If so, we should expect to find them in large numbers in the reports from that state. To a slight extent this is so, for Mr. Lester E. Pratt reports from East Carver, Mass., fifty Red-breasted Nuthatches, an unusual number to be observed in three hours. But this species is mentioned in only one other report from the state, and the numbers of Crossbills reported are not at all phenomenal. Where, then, are the great majority of these three species? They are not here, in their breeding-range; they are not in their customary winter range to the southward. It would seem that either they have perished from some cause, probably lack of food, or else they have migrated, in search of food, to some region from which no reports were received. The only considerable territory in North America north of Mexico to come under this head is that covered by the great forests of northern Canada, and it is to be regretted that no census was sent from this extensive area. It would be most interesting to know that these species, or a large part of them, had migrated *northward* at the approach of winter because they found thus a more favorable food-supply. However, that is theory.

I hope that some readers of BIRD-LORE may be able to throw light on this question.—HARRISON F. LEWIS, *Antigonish, N. S.*

Evening Grosbeaks and Other Winter Birds at Hartford, Conn.

On Saturday afternoon, February 21, following our customary habit on a half-holiday, and notwithstanding the nearly three feet of snow on the level, we decided to see what could be found in the way of

bird life. Providing ourselves with a liberal supply of several kinds of bird-food, we went to what is called Reservoir Park, although not a park at all, but simply the watershed for the city reservoirs therein located. Wading through the snow well above our knees at every step, and avoiding drifts that were six or eight feet deep, we had not gone more than an eighth of a mile from the carline before we heard what can best be described as the sound produced at a distance by striking a telegraph wire several rapid blows with another piece of wire,—a sort of rapid and metallic *chit, chit*. After listening, to get the direction, we soon discovered in a clump of white birches a flock of fourteen Redpolls. Practically every bird showed the bright poll and an abundance of the red wash on the breast. They all seemed to be in unusually fine plumage; but, as the day was perfectly clear and all underfoot an unbroken expanse of white, their colors were perhaps given a more conspicuous brilliance than usual. Later in the day we saw another flock somewhat larger than the first; but as it was nearly at the close of day, the observation was not so pleasing as the first one.

We then half-waded and half-crawled through the deep snow among some small white-pine growth, and were well repaid for our efforts by soon finding a flock of sixteen excellent specimens of the Pine Grosbeak family. The birds were feeding on the seeds of the pines and sumachs, not more than ten feet from the ground, and were very fearless; so we had an excellent opportunity to see them at our leisure. There were several males in the full rosy plumage of this beautiful bird of the North, and occasionally one of the birds would give voice to a little ripple of a song, just as though he were trying to tell the rest of the crowd something in an undertone.

On Monday, February 23 (Washington's Birthday), we again took to the woods and fields to try our luck. After considerable search in one of the large outlying parks, and finding several of the

more common species of birds, we were fortunate enough to happen upon a flock of eight Evening Grosbeaks. This species was first reported by me on the first day of January, and the birds have been seen in varying numbers by many of the members of our club up to about a month ago, when they disappeared. However, on Lincoln's Day, with the thermometer at eight above zero, I discovered eleven nearly a mile from where they were seen today. They are evidently of the same flock seen New Year's Day, having one very brilliant male, although all of the birds today were very much brighter-plumaged than when first reported several weeks ago.

We then took a car about five miles, to get in the same trip, if possible, the Pine Grosbeak seen on the previous Saturday, and were successful in finding the flock of sixteen, together with a flock of some fifteen Redpolls. We have thirteen species for the day, which averaged about fifteen degrees above zero, with snow, as above stated. Has anyone else seen the Redpolls and the Pine and Evening Grosbeaks in the same trip in central or southern Connecticut?

I have also seen within the past month at least a half-dozen Northern Shrike. They are reported as being more than usually abundant in this section this winter.—GEO. T. GRISWOLD, 24 *Imlay Street, Hartford, Conn.*

Wild Fowl at Sandusky Bay in 1756

In the November-December, 1913, issue of BIRD-LORE, there is a very interesting article by E. L. Moseley entitled 'Gull Pensioners.' It describes the feeding of thousands of Herring Gulls by the foreman of the fish companies at Sandusky during the unusually severe winter of 1912, and is illustrated with photographs taken by Ernest Niebergall, of that city.

At the time when Professor Moseley's article appeared, I was making a study of the itinerary of Col. James Smith, who visited Sandusky Bay during the autumn

of 1756, while a captive among the Indians, and was surprised to learn that Sandusky Bay, or lake, as it was then called, was a great resort for Geese, Swans, Ducks, and Gulls, even in those early times. In an account of his travels published by Smith after his escape from captivity, he speaks of the abundance of aquatic birds at "Sunyendeand," an Indian town near the "little lake"—Sandusky Bay.

He says, "Sunyendeand is a remarkable place for fish, in the spring, and for fowl, both in the fall and spring. At this season, the Indian hunters all turned out to fowling, and in this could scarce miss of success." He says that the wild-fowl here feed upon a kind of wild rice that grows spontaneously in the shallow water, or wet places along the sides or in the corners of the lakes; and that the Geese, Ducks, Swans, etc., being grain-fed, were remarkably fat, especially the Green-necked Ducks.

Smith also speaks of the migration of Wild Geese. He says that "the Indians imagined the Geese as holding a great council concerning the weather, in order to conclude upon a day, that they might all, at or near one time, leave the northern lakes, and wing their way to the southern bays. The Indians believed that at the appointed time messengers were sent off to let the different flocks know the result of this council that they might all be ready to move at the appointed time." Smith observes that, as there is a great commotion among the Geese at this time, it would appear by their actions that such a Council had been held. "Certain it is," says he, "that they are led by instinct to act in concert, and to move off regularly after their leaders."—MILO H. MILLER, *Pittsburgh, Pa.*

tunities for photography had I been able to avail myself of them. Under the circumstances, however, only three exposures were made.

I had driven several miles up Willow Creek to get data on a large beaver-dam, and, while skirting the edges of the pond,



An Unsuspecting Family of Great Horned Owls

On September 17, 1912, a family of Great Horned Owls was found near Ironside, Malheur Co., Oregon, which was tame enough to allow splendid oppor-

I flushed a Great Horned Owl from a thicket of alders. He flew but a short distance to a nearby alder and lit upon an upper limb. It was about one o'clock P.M. and the sunlight was rather strong. He sat blinking in the sunshine and seemed to pay but little attention to me beneath. I had my camera with me, and approached

to the foot of the tree, where I made two exposures; then, desiring to try for an exposure on the wing, I focused and drew the slide of the Graflex. At first my attempts to put the bird to flight, without laying down the camera and deliberately throwing at it, were unsuccessful. At a particularly loud demonstration on my part, he would look disapprovingly down upon me, but showed little inclination to leave the tree. Finally, after considerable shouting, he took to wing, and a snap was taken at him as he wheeled out over my head. He lit about seventy-five



feet distant in a similar location, but he was not dislodged from this position until proceedings were resorted to which left no opportunity for photography.

Two others were found in the same grove. The first of these was lost around a clump of trees, but the second was seen before he was flushed, and sat so close that I anticipated a very near approach. Light conditions necessitated coming up from a brushy side, and just before I could get an exposure, at a distance of approximately ten feet, the bird took alarm and disappeared on noiseless wing. As my time was very limited, I could not avail myself further of this rather unusual tameness on the part of *Bubo*. Still

another Owl was seen later in the afternoon, lower down the creek, and he, too, was so tame that I came up to within about fifteen feet; but, in the desire to obtain better light for my last plate, I overdid it and frightened the bird.—H. E. ANTHONY, *American Museum of Natural History, New York City.*

Pileated Woodpecker in Northern New Jersey

While at Newfoundland, N. J., on October 18, 1913, I saw a Pileated Woodpecker, which was of much interest to me, as I had never before seen one in this vicinity.

As I can find no mention of this species having been seen in this section of the country for some years, I thought its occurrence might be of interest generally.

Three years ago, while in Maine during October, I saw quite a number of individuals of this species, and had a good chance to observe them.

The one noted at Newfoundland, N. J., was evidently a male, and was for some time busily engaged on a dead chestnut tree, and I had a good view of him for several minutes.—EDWARD G. KENT, 5 Prospect St., East Orange, N. J.

The Diary of a New Purple Martin Colony for the Season of 1913

April 5. Martin-box put up about 5 P.M.

April 6. English Sparrows inspect and familiarize themselves with bird-house.

April 7. One pair* of Sparrows take possession and begin to build nest.

April 11. Box lowered to ground on hinged pole and nest with one egg removed.

April 13. Sparrows rebuilding nest in same room of bird-house.

April 14. Nest and one egg removed.

April 15. The pair of Sparrows decide

*A second pair of Sparrows may have been responsible for some of the nests and eggs. In some instances, the entries in the diary were made a day or two after the occurrence in question, or two entries were made at the same time.

to build their next nest in another room of bird-house.

April 16. Nest removed (no eggs).*†.

April 19. A new nest and one egg removed from another room. The work of the same pair of persistent Sparrows.

April 23. Nest and two eggs removed.

April 25. Nest removed from attic room of bird-house.†

May 2. Nest and three eggs removed.

May 6. Nest and one egg removed.

May 9. Same old story (another nest and egg).

May 12. The original pair of Sparrows fight and drive off a second pair that attempt to build in box.

May 13. Nest and egg removed.

May 14. Egg found in box in a mere shell of a nest. (Bird evidently hadn't time to build much of a nest.)

May 16. Nest removed.*†

May 20. Large nest and two eggs removed.

May 22. Nest removed.*†

May 23. Nest and one egg removed.

May 25. Nest removed.*†

May 27. Flock of six to eight Purple Martins visit box in P.M. (This news reported by next-door neighbor.)

May 28. One pair of immature Martins stay around box all day. At 7.25 A.M., before leaving for work, the writer saw his first Martin on bird-house.

May 29. Bird-house lowered in the absence of pair of Martins (about 5.30 P.M.) and Sparrow's nest removed.

First week of June.—The pair of Martins commence to build nest. Both birds assisting in carrying nesting materials, sticks, grass, leaves, etc. (The box cannot be lowered any more, but fortunately the Sparrows seem to have yielded to the Martins.)

June 20. An energetic immature Martin (making three regular occupants of box) commences to build a nest (its mate not seen). Sex of bird probably female.

June 23. Colony now numbers two

*†When the bird-house was lowered, very often the eggs would roll from the nests and out of the entrance. Thus some of the eggs may have been lost in the grass and weeds, although most of them were found and recorded.

pairs. (The odd bird having brought home a mate.) Transients, solitary Martins, appear from time to time, but seldom spend more than one or two nights in box. Every day since May 27, visiting Martins to the number of two to twelve come daily to box, and fierce encounters occur between the regular occupants and visitors.

July 29. Both pairs of Martins desert their nests, but visit box on July 30 and 31, and about Aug. 1. Martins leave bird-house for the last time.

Several days later the bird-house was lowered, and one nest (of pair to build first) was found empty, while the other contained two eggs, which were addled. No young birds had been seen, although, from their actions, the first pair were feeding young birds for a couple of days about the time young should have been hatched. Possibly the young were killed by the pair of English Sparrows, which persisted in annoying the Martins in many ways.

This is typical of the early experience of persons starting colonies of House Martins, and shows how our jolly Swallows suffer from depredations of the English Sparrow. The colony, next year, will swell in numbers from one or two pairs (the original pairs) the first week of April, until the bird-house is well filled and, less trouble will be experienced from the Sparrow pests.

Everyone should put up bird-houses for the Purple Martins, and they will come, provided the Sparrows are kept out.—THOMAS L. MCCONNELL, *McKeesport, Pa.*

The Chickadee of Chevy Chase

In the January-February, 1914, number of BIRD-LORE (page 39), the species of Chickadee observed in Chevy Chase is questioned. On that day (Dec. 21) we saw only the Northern Chickadee (*Parus atricapillus*). This species has been very common in Chevy Chase since early in December—much more common in fact than *Parus carolinensis*, and I have

had both feeding together in my garden.

In winter I always keep a variety of bird-food on my window-sills, as well as on food-shelters, and whenever the snow covers up the supply of food in the fields the birds come into the yard by the score. Last Sunday was no exception to the rule, and my place was alive with birds, including White-throated Sparrows, Purple Finches, Juncos, Cardinals, Mocking-birds, Blue Jays, etc., and, as I was standing at a window, there were feeding at the same time on the window-sill a Carolina Chickadee, a Black-capped (northern) Chickadee, and a Tufted Titmouse. The Black-capped Chickadee is readily distinguishable from its southern cousin by its larger size and its white-edged wing-feathers; yet, as we are near the line separating the territory of these two species, one has to use caution in this section not to report the Black-capped as the Carolina Chickadee.—S. W. MELLOTT, *Chevy Chase, Md.*

Winter Notes from Massachusetts

Since November 7, I have observed almost daily, in locations scattered pretty generally over Southern Berkshire, large flocks of Pine Grosbeaks. They are among the more common of our birds at this date (December 6), and have been for the last two weeks. Not since January, 1907, have I seen them in anything like such numbers. Last winter, and the winter before, there were none in this particular neighborhood. Now it is no infrequent thing to come upon four or five flocks within as many miles, each flock numbering upward of fifteen individuals. But in their daily appearance they are irregular. Several days may elapse with no record, and then for several more they are feeding in the birches within a few yards of the house. The proportion of mature males seems to be less than one in ten. Wherever one finds them, they are much less tame than in 1907, flying off when approached more closely than twenty or thirty feet, going first into the tree-

tops, and then away into the deeper woods in a straggling flock. In 1907, I succeeded in touching several while feeding, and caught one in the air as it flew directly into me. It would seem that this year's birds are better acquainted with men; their wildness, coupled with the early date of their arrival, seems to suggest that the individual birds we have here now are the vanguard, living in summer on the border of civilization. This fancy of my own creation is strengthened by the report of a friend observing in eastern Maine, who says they are common there and very tame.

I have also recorded several Shrikes, frequently observing them on the outskirts of a flock of Grosbeaks. I watched one for many minutes, and during that time his bearing was entirely amicable. A little later I returned to see three Blue Jays drive him off. The Grosbeaks, meanwhile, had disappeared into the woods.—HAMILTON GIBSON, *Sheffield, Mass.*

Winter Notes from Connecticut

There has been a scarcity of northern birds, but many most interesting records.

December 8, Robert McCool shot a Snow Goose at Cedar Point, near Westport, and it has been mounted.

December 28, there was a flock of thirty-six Red-winged Blackbirds, one Grackle, and one Cowbird, at Stratford Point.

Through January, Myrtle Warblers were numerous in suitable places, and on February 19 I saw a Shrike chasing one through the trees, the Warbler trying hard to escape, and uttering its alarm note constantly.

The same day, I found a Catbird in a tangle of cedar, briar, and bayberry bushes. It seemed all right, but stupid, and with feathers much fluffed, and it must have succumbed in the severe cold soon after.

February 21, in a swamp where the Night Herons nest, I found where the Crows had feasted upon two Night Herons, every particle of flesh having been

cleaned from the bones, and they must have been eaten within three days, since the last snow.

Mr. Miller, of the American Museum, pronounced one as a two-year-old bird, and the other is clearly a younger bird. Sage and Bishop, in their 'Birds of Connecticut,' give the latest date for the Night Heron as November 17, though they occasionally winter near here. Three Pine Grosbeaks were noted in January, a few Siskins, and a few Snow Buntings.

February 27, Mr. James Hall found a Hermit Thrush among sumacs in a swamp, the bird being in fine condition.

March 4, I found the first flock of Redpolls, about fifty in number, and containing some fine males.

Ice and the cold have been hard on birds, many Ducks have died, a Pheasant a Meadowlark, and a Short-eared Owl, all terribly emaciated, were found dead, and their fate told that of many others, no doubt, though more people have been feeding birds about here this winter than ever before.—WILBUR F. SMITH.

A City Kept Awake by the Honking of Migrating Geese

Shortly after midnight, October 6, I was awakened from sleep by the honk-honking of migrating geese. I arose at once and looked out to see the birds. The air was filled with heavy mist, and the sky was hidden by black clouds, so that the birds could not be seen in the darkness. The honking was very loud at first, and then it could hardly be heard. Soon it would seem as if the Geese were flying past my window again. It was evident that the Geese were flying back and forth over the city. The honking continued until daybreak.

The next day, many citizens in Norman remarked about the flock of Geese which seemed to be flying back and forth over the city during the latter part of the night.

These Geese were doubtless migrating southward, under a clear sky, during the early part of the night. Then the sudden extreme darkness which came on between

10.30 P. M. and midnight must have bewildered them so that they lost their way. In their wanderings, they came into the zone illuminated by the electric lights of the city, and flew back and forth over the lights until daybreak.—L. B. NICE, University of Oklahoma, Norman, Okla., Nov. 12, 1913.

Snowy Owl at Chillicothe, Missouri

About ten o'clock on the morning of February 14, while passing through a grove of small oak trees, I saw a large white object among the leaves of one of the trees. After observing it for a few more minutes. I was able to identify it as a Snowy Owl. A few days before, we had a snowstorm followed by some very cold weather, during which the Owl had probably come southward. The next day I heard another person speak of seeing a large white Owl, which I suppose was the same individual.—DESMOND POPHAM, Chillicothe, Mo.

The Voice of the Tinamou

Having heard Tinamous calling at nightfall in tropical forests on the Island of Trinidad, I cannot help doubting if anyone not an artist as well as an ornithologist, and no less gifted with pen than brush, could possibly have characterized their utterances in terms at once so true and picturesque as those employed by Mr. Fuertes, in a paragraph published in the last number of BIRD-LORE. Dealing subjectively with a matter of uncommon difficulty, this remarkable passage is essentially a word picture, sketched with such rare and effective combination of literary skill, artistic fervor, refined appreciation of the spiritual in nature and careful avoidance of all overstatement, that it expresses precisely what every reverent-minded naturalist must feel when listening to the soul-stirring voice of the Tinamou, however incapable he may be then or afterward of rendering his impressions into similarly worthy language.—WILLIAM BREWSTER, Cambridge, Mass.

Book News and Reviews

A DETERMINATION OF THE ECONOMIC STATUS OF THE WESTERN MEADOWLARK (*STURNELLA NEGLECTA*) IN CALIFORNIA. By HAROLD CHILD BRYANT. University of California Publications in Zoölogy, Vol. 11, No. 14, pp. 377-510, pls. 21-24, 5 text figs. Feb. 27, 1914.

This paper of 126 pages, devoted to a study of the food of the Western Meadowlark, at once takes its place among the most important contributions to the subject of economic ornithology that have yet appeared. It is based on the examination of nearly two thousand stomachs of this species from all parts of California, collected in every month of the year.

Of the total amount of food taken throughout the year, sixty-three per cent was found to be animal, and thirty-seven per cent vegetable. Beetles and Orthoptera (crickets and grasshoppers) each constitute one-fifth of the total quantity. In summer and fall, Orthoptera form a large percentage of the food—eighty-five per cent of the whole amount in August. Cutworms and caterpillars also constitute an important item. The only non-insect animal diet comprises a few sow-bugs, snails, earthworms, and millipedes. Of the vegetable food, grain constitutes seventy-five per cent, or nearly thirty-one per cent of the total; but nearly one-half of the entire amount of grain is consumed in November, December, and January, when little insect food is available.

As the author states: "Few people have any realization of the great quantities of insects consumed by birds," and he computes that in the great valleys—the Sacramento and San Joaquin—alone, the young Meadowlarks in the nest require 343½ tons of insect food each day!

Of the charges brought against this species, only one of any importance is sustained. Its depredations in fields of young grain are sometimes serious, due to its habit of boring down beside the

sprout and pulling off the kernel. The author believes, however, that this damage is more than balanced by the good done by the destruction of harmful insects, and does not warrant wholesale killing of the Meadowlark. He advises certain preventive measures and frightening the birds from the fields during the short period necessary.

Ten reasons are given why the Meadowlark should be a protected non-game bird, among the number being its esthetic value, and the author concludes that it "has been shown to be distinctly beneficial to agricultural interests as a whole, and thus to all the people of the state."

In the introductory matter, Mr. Bryant discusses the History of Methods in Economic Ornithology, and a comparison of the various methods. Supplementary sections include miscellaneous data secured incidentally, to the examination of the large series of birds, as parasitism, malformation, albinism, molt, etc.; and several pages are devoted to the important question of whether protective adaptations of insects protect them from the attacks of birds, and of availability as a factor in the kind and quantity of food.

A bibliography and four plates illustrating food and feeding habits conclude the paper.—W. DEW. M.

A STUDY OF A COLLECTION OF GEESE OF THE *BRANTA CANADENSIS* GROUP FROM THE SAN JOAQUIN VALLEY, CALIFORNIA. By HARRY S. SWARTH. University of California Publications in Zoölogy, Vol. 12, No. 1, pp. 1-24, pls. 1-2, 8 text. figs. Nov. 20, 1913.

As one of the earliest tokens of returning spring-time, the Wild Geese are of interest to everyone; while the ornithologist finds in their variations in size, form and color, scarcely paralleled among birds, fruitful material for study in evolution.

Mr. Swarth, in an endeavor to determine the exact status of the Canada Geese of California, examined numbers of each

of the currently recognized subspecies. He concludes that all four are well founded, but intergrade so completely that they cannot be separated as species, notwithstanding the differences in size and other respects between the little Cackling Goose of Alaska and the big Canada Goose of the United States, which are so striking that no one seeing only the extremes would question their specific distinctness.

The form breeding in California is found to be identical with the Common Canada Goose of the eastern states. The least known of the four races, the White-cheeked Goose, is a large, dark non-migratory form, occupying the humid northwest coast region. It does not breed in northern California, as has been supposed; nor even reach the state in winter, so far as can be determined.

Diagrams graphically illustrate the variations in size and proportions; and the diversity in the pattern of the head and neck is shown by two plates of figures representing twenty individuals.—W. DEW. M.

BULLETIN OF THE UNITED STATES
DEPARTMENT OF AGRICULTURE NO.
58. Five Important Wild Duck Foods.
By W. L. McAtee.

Owing to the interest manifested in a previous circular of the Department of Agriculture, giving information on certain plants of importance as food for Wild Ducks, namely the wild rice, wild celery, and pondweeds, the department authorized Mr. McAtee to continue his investigation of this subject.

The present paper summarizes the results of Mr. McAtee's work. Five additional plants of great value as food for wild-fowl were found to be the delta duck potato and the wapato (species of *Sagittaria*, or arrowhead), the nut grass or chufa (*Cyperus esculentus*), the wild millet (*Echinochloa crus-galli*), and the banana water-lily (*Nymphaea mexicana*). While at present most of these plants are of only local importance, the author believes that their field of usefulness can be greatly extended.

Maps illustrate the distribution of each species, and the plants with their tubers or bulbs—the principal edible portion in most species—are figured.—W. DEW. M.

THE BODLEY HEAD NATURAL HISTORY.
By E. D. CUMING. With illustrations
by J. A. Shepherd. Vol. II, British
Birds. Passeres. 12mo. 122 pages;
numerous illustrations. New York,
John Lane Company. Price 75 cents,
net; postage, 6 cents.

The second volume of this attractive little work contains accounts of the British Warblers, the Dipper, the Nuthatch, and the Creepers. Mr. Shepherd's quaint illustrations in color, one or more on every page, "do not aim so much at scientific accuracy as at giving a general impression of the character, habits, and appearance of the animal depicted. It is believed that in this respect they will be found certainly more artistic, and probably more suggestive than elaborate plates or even photographs."—W. DEW. M.

DIE VÖGEL. HANDBUCH DER SYSTEMATISCHEN ORNITHOLOGIE. By ANTON REICHENOW. Zwei Bände. I. Band. Large 8vo. 529 pages; numerous illustrations. Ferdinand Enke, Stuttgart, 1913.

This is a handbook of ornithology for the student, and a work of reference for the general reader. Though written in the German language, it treats of the birds of the world, and hence demands our notice. Volume I consists of 529 pages, the first 67 of which relate to the subject in general, as internal and external structure, geographical distribution, and classification.

The systematic portion includes all the "lower groups" down to and including the Owls and Parrots. Determination of the genera, and in many cases the species, is facilitated by "Keys;" every genus being diagnosed and at least a representative series of the species treated. Descriptions of habits, nests, and eggs are limited to brief summaries under the headings of the orders and families.—W. DEW. M.

We have received from the Comstock Publishing Company, of Ithaca, New York, a copy of their new Bird Note Book, designed by Anna Botsford Comstock, and illustrated with outline figures, by Fuertes, of thirty common birds.

This notebook is planned to combine schoolroom work with field observation. Sixty pages for notes, two for each species, are so arranged that the proper descriptive term may be underlined and the blank spaces filled in by the observer. The outline figures are intended for careful coloring in the schoolroom or at home.—W. DEW. M.

The Ornithological Magazines

THE AUK.—The January issue is a bulky number, and filled with numerous half-tone plates including one of a new Petrel (*Æstrelata chionophara*), which is described by Mr. R. C. Murphy. The first instalment of an elaborate article by Dr. R. M. Strong 'On the Habits and Behavior of the Herring Gull, *Larus argentatus*, Pont.,' is well illustrated. The systematic grouping of facts follows the lines of modern research work and the original observations are a well marshaled host, setting a standard for future workers in kindred topics.

'In Memoriam: Philip Lutley Sclater,' by Dr. D. G. Elliot, marks the passing of a great ornithologist of the old school. During a long and active life, Sclater contributed no less than 1,500 scientific papers, most of them on birds, in which his interest never flagged.

Dr. C. W. Townsend enters 'A Plea for the Conservation of the Eider' on the coast of Newfoundland and Labrador, where persecution by Indians, Esquimaux, and fisherman threatens the duck with extinction. Mr. W. M. Tyler writes minutely 'Notes on the Nest Life of the Brown Creeper in Massachusetts.' He thinks that "the species will be found breeding here as long as the [gypsy] moths continue to kill the trees." Mr. J. D. Figgins, writing on 'The Fallacy of the Tendency toward Ultraminute

Distinctions,' shows that considerable changes both in size and color have occurred in Gambel's Quail introduced into parts of Colorado some twenty-five years ago.

Of local lists, we find 'Notes on the Ornithology of Clay and Palo Alto Counties, Iowa,' by Mr. A. D. Tinker, and 'Additions to . . . Birds of . . . Cass and Crow Wing Counties, Minn.,' by A. W. Honeywill, Jr. Some nomenclatural questions are brought up afresh by Mr. G. M. Mathews under title of 'Some Binary Generic Names,' and an account of the thirty-first meeting of the A. O. U. is given by our Secretary, Mr. J. H. Sage. Notes and Reviews are numerous and valuable, and an obituary of Alfred Russel Wallace adds another prominent name to the long list of deceased members.—J. D., Jr.

THE CONDOR.—Two recent numbers of 'The Condor' still await notice in these columns. The number for November, concluding Vol. XV, contains nine general articles on a variety of topics. Joseph Mailliard contributes a brief obituary notice of H. B. Kaeding, one of the active members of the Cooper Ornithological Club. Herbert Massey, a member of the British Ornithologists' Union, supplements Dr. Shufeldt's recent paper on the eggs of North American Limicolæ with an account of the eggs of European species which are accidental in America. Ray adds 'Some Further Notes on Sierran Field-Work,' with a list of 49 species of birds observed, in June, 1910, in Eldorado County. Mailliard describes three 'Curious Nesting-places of the Allen Hummingbird' at San Geronimo—one on a pulley and another on a rope under a wagon-shed, and the third on a wire hook in a carriage-house. Wright notes briefly 12 species of 'Birds of San Martin Island, Lower California.' Dawson contributes three brief but interesting articles, one on 'Identification by Camera,' showing the differences between certain shore birds, and two critiques of Ridgway's 'Color Standards,' under the titles, 'A Mnemonic

Device for Color-Workers' and 'A Practical System of Color Designation.'

The most extended paper is a 'Preliminary Report,' by T. C. Clarke, on an extraordinary disease which has occurred among the Ducks near Tulare Lake, Calif., each year since 1909. The chief species affected were the Shoveller, Pintail, Cinnamon Teal, and Greenwing Teal. The dead birds found in 1913 included 1,753 Ducks, and about 300 other miscellaneous birds. It is hoped that this investigation will be continued until the cause of the disease, still obscure, is fully determined.

The January 'Condor' opens with an interesting article, by Dawson, on 'Direct Approach as a Method in Bird Photography,' illustrated by some remarkable pictures of Ibises, Phalaropes, Sanderlings, and Dowitchers, taken at short range. In a characteristic review entitled

'The People's Bread,' the same author points out the numerous shortcomings in the recent 'Western Bird Guide,' by Reed, Harvey and Brasher. Van Rossem contributes some 'Notes on the Derby Flycatcher' in Salvador, in 1912; and Rust, a detailed, illustrated account of the 'Nesting of the Sharp-shinned Hawk' near Coeur d' Alene, Idaho, in 1913.

A 'Second List of the Birds of the Berkeley Campus,' by Joseph Grinnell, shows some interesting results of intensive bird study of a limited area. The campus of the University of California includes 530 acres. The first list of its birds published three years ago contained 76 species, while the present list enumerates 97 species, and the author estimates that a mean population of approximately 8,000 individual birds is maintained throughout the year within this area.—T. S. P.

A Coöperative Study of Bird Migration

BIRD-LORE asks the coöperation of its readers in recording the migrations of certain common birds in the belief that a joint study of their movements will add to the interest with which their coming is awaited, and contribute something of value to our knowledge of their travels in particular, and bird migration in general.

It is proposed to take three birds which arrive during the earlier part of the migration season, and three more which are due in the latter part. A summary of observations on the first group will be published in BIRD-LORE for June, while those relating to the second group will appear in BIRD-LORE for August.

The first three birds selected were the Red-winged Blackbird, Robin, and Phoebe; the second group of three includes the Chimney Swift, House Wren, and Baltimore Oriole. A blank form is appended showing how the records should be scheduled before sending them to BIRD-LORE. These blanks should be mailed to Mr. Charles H. Rogers, care of BIRD-LORE, American Museum of Natural History, New York City, not later than June 1.—F. M. C.

REPORT FROM.....
(Give locality)

MADE BY.....
(Give name and address of observer)

	Date first seen	No. seen	Date next seen	No. seen	Date of becoming common
Chimney Swift					
House Wren					
Baltimore Oriole					

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

FOR the first time in its history of thirty-one years, the American Ornithologists' Union will hold its annual congress in the spring. Heretofore these always memorable gatherings have usually occurred in November, but the present year it is proposed to convene on April 7-9, in Washington, D. C. This combination of date and place gives promise of an exceptionally enjoyable meeting. The beauties of 'spring at the Capital' have long been sung, and visiting ornithologists may be assured an opportunity to experience them under both sympathetic and skilful guidance.

The hotel headquarters of the Union will be the Ebbitt House. The daily public sessions for the presentation and discussion of scientific papers will be held in the National Museum.

Anyone interested in the study of birds is eligible for election to Associate Membership in the Union; and everyone who realizes how much the causes of bird-study and bird-protection owe to this organization should welcome an opportunity to become affiliated with it. The annual dues of Associate Members are \$3, and all members receive 'The Auk,' the 600-page journal of the Union, without charge. Candidates for Associate Membership should apply to Dr. J. Dwight, Jr., Treas., 134 West 71st Street, New York City, or, from April 6 to 9, care of the National Museum, Washington, D. C.

THE creation of reservations and appointment of wardens may protect birds from their human enemies, but even government control and the services of so faithful a guardian as Paul Kroegel have been insufficient to protect the Pelicans of Pelican Island from disaster which befell their offspring during the nesting-season just past.

In the last issue of BIRD-LORE, Warden Kroegel wrote, under date of January 1, 1914: "We have now as fine a batch of young birds as I can remember for this time of year;" but when, with Ernest Seton, we visited the island on February 15, we beheld the most distressing scene of which one could well conceive. The ground was, as thickly strewn with the bodies of dead young Pelicans as though batteries of guns had been discharged at close range into massed flocks of them. A few dozen young were still alive, some of which could fly, while others vainly tried to do so. At the southwest and northern ends of the island possibly a thousand old birds were resting or bathing, and one nest held three eggs, on which one of a pair of adults sat while the other stood nearby. This was the only occupied nest on the island.

We have visited Pelican Island on many occasions, and have before seen the heavy fatality which may follow unfavorable weather conditions, but never before have we found anything approaching the catastrophe which has befallen the colony this year.

Its cause is by no means clear, but there are certain facts which are beyond dispute. Thus the cause of the young birds' death seems beyond question to have been starvation, but why they should have starved is another question. Death had occurred since February 1, just as the birds were about to fly. Some birds indeed, had escaped the fate of their less-advanced or weaker comrades by acquiring the power of flight, and with it ability to feed themselves, and some of these were seen about the island, as well as some distance from it; but it was obvious, even without an exact census, that the

greater part of the 1,600 birds recorded by Mr. Krøgel, after surviving the period of early Pelican life had died at an age when, with a week or so more of food and growth, they too would have been able to care for themselves.

That starvation was the cause of death was evinced by the emaciated condition of all the bodies of the birds examined, and even more convincingly and pathetically by the actions of some of the surviving young which were awaiting their fate. With open bills they came directly to us, touching our clothing and voicing their wants eloquently, but in tones which bore but faint resemblance to the vigorous food-call of the hungry but well-nourished young Pelican.

These birds had obviously been deserted by their parents, and it is not unreasonable to suppose that the birds whose bodies dotted the island thickly about us had starved to death, because of similar desertion.

If this be true, one naturally seeks the reason for this desertion. In February, 1908, on our last visit to Pelican Island, large numbers of young were found that had died during an exceptionally cold spell, which had evidently prevented the parents from fishing. These young, however, were all in the downy stage, and hence we may believe were less hardy than birds which had almost acquired the power of flight. Furthermore, we had been in eastern Florida the present year since February 2, and can affirm from personal experience that there had been no storm or cold wave of sufficient severity to prevent the parent birds from fishing. Is it possible, then, that for a period of several days the old birds had had such poor fisherman's luck that they could not find sufficient food for their young? While this supposition might be true of a few pairs of birds, in view of the wide area of sea and river covered by the parents of all the dead young it is difficult to believe that it could be true of them all.

Personally, therefore, we believe that starvation followed desertion, and deser-

tion was due to a failure, or giving out, of the feeding instinct, which had run its course. Possibly the weather may to some extent have induced the old birds to abandon their young; but we are convinced that, if exactly the same weather and fishing conditions had prevailed earlier in the season, the feeding instinct would have then been sufficiently strong to have induced the birds to overcome them and to secure food enough to support their families.

Pelicans begin to gather on their chosen island generally in November, and the nesting season is well under way in December, but on the west coast of Florida, Brown Pelicans do not begin to nest until April.

This past season (1913-14) the birds returned to the island in October, the earliest date, Warden Kroegel states, on which he has recorded their arrival. The nesting-season was correspondingly early, and hence abnormal, a fact which should be taken into account when one tries to explain the failure of the parent birds properly to care for their offspring.

But, whatever conclusions we may reach in regard to the factors which brought disaster to the nesting-season of 1913-14, it is clear beyond dispute that, under the circumstances now existing on Pelican Island, the Pelicans are more in need of protection than at any previous time in their history. It is not the plume-hunter who is so much now to be feared as the thoughtless tourist whose landing drives young from their ground-nests and creates a confusion which may result in many deaths. Fortunately, Warden Kroegel's watchfulness prevents mishaps of this kind. His guardianship of the island is now so generally known that, in most instances, application for a permit to visit it under his guidance is made in due form. But, if a strange boat is detected in suspicious proximity to the Pelicans' home, the National Association's patrol boat 'Audubon' is soon under way, and the trespassers are made aware of the effectiveness of the warning notices posted about the island.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the editor, at 53 Arlington Avenue, Providence, R. I.

BIRD AND ARBOR DAY

Perhaps the greatest value of festival days and anniversaries of all kinds lies in their significance, and especially in the appeal which they make to those who observe them. The appointment of a new anniversary is a matter of far more import than it might at first seem to be. Authority alone, even of presidents, governors, or other officials of the people, cannot make a festival, or even a fitting anniversary, out of a particular day. Upon those who take part in the observance of the day falls the responsibility of its success and continuance.

In the long-forgotten past, when man approached Nature with a child-like fear and imagination, it was not difficult to people the universe with deities whom he must propitiate, and in whose festivals he must share. Throughout later ages, it has seemed consistent with man's maturer judgment to pay some annual tribute to heroes and patriots, to celebrate events of national importance, or to commemorate experiences which have had lasting influence in shaping human environment and in molding character. The days set apart by different peoples for such formal acknowledgment of man's indebtedness to great lives, great events, and great ideals, ought to be true festivals and signal anniversaries, rather than mere holidays, given up to feasting and ordinary pleasures.

Arbor Day is a very recent anniversary, while Bird and Arbor Day combined is as yet observed in comparatively few states. This day has been set aside in the hope that man may be brought closer to nature in a practical, suggestive and inspiring way. Whether the day fulfills its mission, it is the privilege of this generation to determine.

Possibly not one of our school anniversaries carries with it such freshness and buoyancy as this festival of the trees and birds. This is because spring is the expression of each New Year in its youth, not only budding trees and returning birds, but also freshly coated animals, flooded streams and lengthening days of luxurious sunshine, remind us that the transcendent miracle of Nature is taking place. To appreciate this miracle, we must share in the general transformation of our surroundings.

Who that has ever stepped on the yielding ice among the hummocks of a marshy pasture, or picked a treacherous way along the gullies and sink-holes

of a retreating brook-channel at freshet-time, can forget the feeling of the earth, of the air, and the scent of spring which everywhere abounds? No other days are like these days of budding leaves and drying soil. It is a glorious time, not only to be outdoors, but to be outside self. It is a revelation of a new kind of kinship to plant a tree and to welcome the return of the birds—a kinship with Nature.

But the real spirit of spring must go with the planting and the welcome; otherwise the observance of Bird and Arbor Day will become a tiresome repetition of a once novel idea.

Viewed in this light, it becomes a large but pleasant task to instruct our boys and girls how to meet spring with open hands and hearts. What work more attractive or more full of joy could Audubon Societies take part in than this one of interpreting the true meaning of Bird and Arbor Day!

Busy teachers and restless pupils would both appreciate the coöperation of bird-students and nature-lovers in this spring-festival season. Will you not all make some definite attempt to observe Bird and Arbor Day *more in the spirit of spring*? Will you not make an attempt to observe it together in the school-grounds and public parks of our land, or better yet, in the woods and fields of the open? Will you not strive to attach more significance to the great idea which was the reason for the appointment of this day, the preservation and conservation of Nature?—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XIV: Correlated Studies, Reading, Elementary Agriculture, and Geography

"Look at this beautiful world, and read the truth
In her fair page; see every season brings
New change to her of everlasting youth—
Still the green soil with joyous living things
Swarms—the wide air is full of joyous wings."—Bryant.

As the wild winds of March tear the tree-tops and rush the melting snows of February down the hillsides into swollen brooks and channels, we feel the hope of springtime rising high in our breasts. There may be more storms ahead, but they cannot last long, for the great sun stays with us more and more each day, and neither snow nor wintry storms can brave the heat of its life-giving power.

Jack Frost must stop playing with the temperature now, dropping it to the nipping point for the last time. The ice will break up in the rivers, rushing headlong down stream, and it will soon melt, too, from our streets and crackling ponds.

But this is not life, only a preparation for life. It is perhaps not joyous to many, only the sign of coming joyousness. Still there is far more life in late February and March than one uninitiated in the truths of Nature might suspect; while April brings myriads of creatures we ought to know by sight or sound, or some kindred sense. The early bluebird, the skunk-cabbage and honey-bee are a few of the forms of life that greet the observant eye. If a wave of sunlight breaks the chill of the air, an occasional "mourning cloak" butterfly may appear. In grassland, woodland, and plowed fields, hordes of insects are about to hatch from winter eggs, crawl forth from hibernating refuges or to emerge from snugly hidden pupæ, which have survived the coldest weather, housed in the earth, under roots or in sheltered nooks.

To check this winged army of destruction, other winged hosts are advancing from the distant Southland, our migratory birds, whose coming brings the joyous certainty of spring. How wonderful it is that just as leaves and buds are swelling and unfolding, and insects in countless numbers are finding their way to the open, the birds should arrive in a feathered multitude to swell the ranks of living things. There is a reason for this, a law of nature, if we could understand it, that governs the migratory movements of birds.

There is a special work for birds to do in nature, and, with almost clock-like regularity, they journey north exactly at the time when this work is ready to be done. (Cmp. Bird-Lore Vol. XIII, No. 3, p. 160.) Perhaps you have never thought of birds as workers. Watch them, and see how much they do in a day, or even in an hour. Their chief work is to get food for themselves and their nestlings, and, in doing this, they eat not only seeds and small animals, but also thousands and thousands of insects, which would otherwise spread over the earth, devouring vegetation with frightful rapidity.

If man had never tried to change the ways of Nature by cutting off forests, draining and plowing up large tracts of land to plant to special crops, if he had never brought into our country seeds and trees and insects and animals from across the ocean, it might be easier to study the natural habits of birds, and to judge exactly what the results of these habits are. We have already learned that birds are fitted with tools which enable them to crack seeds of nearly all kinds, to dig beneath the bark of trees, to probe in the earth, to scoop through the air and water, in short, to hunt for food in an almost endless variety of ways and places. Since they are, on the whole, quick to discover new kinds of food as well as new kinds of nesting-sites, we call them easily *adaptable* to the changing conditions of wild and cultivated Nature.

An illustration of the adaptability of birds to a new food-supply which is now found in the north-eastern United States is shown in connection with the gipsy and brown-tail moths, introduced insects whose yearly devastations cost us many thousands of dollars.

The Downy Woodpecker, Kingbird, Ring-necked Pheasant (introduced into our country from the Old World), Phoebe, Least Fly-catcher, Scarlet

Tanager, Red-eyed Vireo, Black and White Warbler, and other species, attack these pests and devour them. Forbush says: "As time goes on, it is probable that birds will become more and more efficient enemies of the gipsy-moth and the brown-tail moth, as they learn better how to manage them. . . . As the gipsy-moth spends more than half of the year in the egg, this is its most vulnerable point. If Jays, Creepers, Nuthatches, Woodpeckers, and other birds, could learn to eat these eggs, as European birds are said to do, they would then have an increased food-supply the year round. Naturally, they would increase in numbers, and thus an effective natural check to the gipsy-moth in America would be established, provided these birds were protected.

"The brown-tail moth is more exposed to the attacks of birds than is the gipsy-moth, since the larvæ hibernate in their nests in curled-up leaves that remain on the tree all winter (see illustration). Already some birds are learning to open these winter nests and to extract the larvæ from them. If the birds once learn this lesson thoroughly, the power of this pest will be greatly lessened."

The Red-winged Blackbird and Blue Jay seem to have found out this new food-supply, while a number of other species eat the hairy caterpillars which have crawled out of their winter nests, and also of the moths upon their emergence from the pupal stage.

The variety and number of insects are so great that, if birds had no other kind of food-supply, there would doubtless be more than enough for all of them, provided there were less cold weather and more warm weather.

In the remarkable economy of Nature, however, every form of life has its place, its season, and its work. To study the intricate relations which result from this order is a life-long task. Perhaps this is one chief reason why nature-study is so absorbing, because there is so much to learn that is entirely new. Surely, in no other study can teachers and pupils be discoverers and observers together to better advantage.

But, to go back to the food of birds, numberless as the insects are, birds find other kinds of food awaiting them when they journey northward. Let us turn for a moment to the lists of trees, plants and animals which we studied in connection with the distribution and migration of birds, taking the Robin as our guide. (See *Bird-Lore*, Vol. XIV, No. 1, p. 57; No. 5, pp. 303-306; No. 6, pp. 364-368; Vol. XV., No. 1, pp. 53-57.)

How delightful a trip it would be to fly with the Robin, from one place to another, from one tree to another, somewhat slowly at first, then more and more rapidly as spring hurried by us, seeking the distant North?

Through tropics and semi-tropics, great plains and deserts, pine-barren country, by mountains and valleys, we should go; each day almost, finding new feeding-areas and nesting-places. If we could count the different trees which a Robin visits on its migration-trip, and the different things which it finds to eat, what a long list it would make!



By permission of the Rhode Island Department of Agriculture

WINTER NESTS (*Hibernacula*) OF THE LARVAE OF THE BROWN-TAIL MOTH

These nests should be cut off in March and burned

Now that we are watching for the Robin, Red-winged Blackbird, and Phoebe, suppose we learn a few facts about their food, putting our information down as follows:

Food of the Robin, Red-winged Blackbird and Phoebe, Three of Our Beneficial Birds

(See, Some Common Birds in their Relation to Agriculture; by F. E. L. Beal, Farmers' Bulletin, No. 54, U. S. Dept. of Agriculture, and also, The Relation between Birds and Insects, Yearbook of the U. S. Dept. of Agriculture for 1908.)

	Robin	Red-winged Blackbird	Phoebe
January.....	Wild fruit.	Weed-seed.	In winter home.
February.....	Wild fruit.	Weed-seed.	In winter home.
March.....	Wild fruit, beetles and worms.	Weed-seed and insects.	In winter home.
April.....	Wild-fruit, worms and insects.	Weed-seed and insects.	In winter home.
May.....	Wild fruit, worms and insects.	Mostly insects, a little grain, a few snails and crustaceans.	Insects such as May beetles Click beetles Weevils Grasshoppers
June.....	Wild fruit, worms and insects.	Weevils, 25 per cent less grain.	Wasps. Wild fruit
July.....	Wild fruit, worms and insects.	Mostly insects, a very little fruit, more grain.	Flies
August.....	Wild fruit, grasshoppers 30 per cent.	Weed-seed 30 per cent. Considerable grain in certain localities, insects.	Bugs. Wild fruit Spiders
September.....	Wild fruit, beetles.	Weed-seed and insects, grain and rice notably in the West and South.	
October.....	Wild fruit, beetles.	Weed-seed and insects, grain and rice notably in the West and South.	
November.....	Wild fruit, a few insects.	Weed-seed.	In winter home.
December.....	Wild fruit.	Weed-seed.	In winter home.
Summary.....	Animal matter, chiefly insects, 42 per cent, largely injurious species. Small fruits and berries about 58 per cent, of which 47 per cent is wild fruit, and a little over 4 per cent cultivated fruit.	Vegetable matter about 74 per cent. Animal matter, mainly insects, 26 per cent. Nearly seven-eighths of the food of this species is weed-seed and injurious insects.	Insects and spiders 93 per cent. Wild fruit 7 per cent.

In habit of nesting, manner of feeding, song, plumage, and distribution quite different, these three species will furnish us ample work for study and observation during the year. It will be very much worth while to find out all that we can about them without in any way disturbing them. They have come, and are still coming, thousands of miles, to spend the summer with us. The Robin may even linger through late fall, or, if the winter be mild, the

entire year. When we stop to think how many places they have passed through which we have never visited, how many things they have seen, heard, touched and tasted which we know nothing about, and how many things they do which we cannot do, we shall feel a great wonder about the beautiful world, of which the poets never tire of singing to us,—the world of life and joy.

As we start out to greet the birds and trees and flowers, the animals, and everything which nature has to show us, let us not forget the wise instruction of Dr. William Turner, an old English physician, chaplain, and naturalist who, in the dedication of his history of the principal birds noticed by Pliny and Aristotle, published in 1544, wrote: "No one demands sight in the feet, hearing in the legs, smell (or taste) in the hands, or smell in the arms; but *all these things are necessary in the head*. Inasmuch, therefore, as so many senses are requisite in the head, which is set over one body alone, how many senses and what a wealth of wisdom and learning are demanded from that head . . .?"

So let us keep our ears open as well as our eyes, our noses ready to catch the faintest odor, our tongues quick to taste, and our hands to feel, while the head directs all, including the heels, to paraphrase an old adage.—A. H. W.

"He filled their listening ears with wondrous things."

SUGGESTIONS

1. Address Forest Service, U. S. Dept. of Agriculture, asking for Circular 96, leaflet on Arbor Day, prepared by Gifford Pinchot.
2. Plant trees and shrubs, and *plant them right*, as a forester would, first learning which kinds of trees and shrubs are most needed in and best suited to your locality.
3. Are there any maple keys about your neighborhood, and, if so, what are they doing now?
4. Did you ever see a mud-wasp make a vase of clay?
5. Where do the bees go for food at this season?
6. Look at the ragweed, to see what birds find its seeds to their liking as it matures.
7. Can you hunt for a fairy shrimp? Where? Why is it called fairy?
8. How many frogs and toads do you know by sound and by sight?
9. How does a squirrel strip a pine-cone to get at the seeds?
10. Can you name all the trees and shrubs about your home and school?
11. Learn the meaning of egg, larva, pupa, and imago, as applied to insects.
12. How many kinds of insects do you know?

References: Nature's Craftsmen, by H. C. McCook; Nature-Study and Life, by C. F. Hodge; Our Native Trees, by H. L. Keeler; The Birds' Calendar, by H. E. Parkhurst; The Migratory Movements of Birds in Relation to the Weather, by W. W. Cooke (See Yearbook of U. S. Dept. of Agriculture for 1910); The Legend of the Blue Flower, by F. H. Burnett; Bird and Arbor Day Program, Bird-Lore, Vol. XIII, No. 2; Handbook of Nature-Study, by A. B. Comstock.

FROM ADULT AND YOUNG OBSERVERS

A NATURE-STUDY CLASS

Early in the spring of 1912, the writer was given a class of twelve twelve-year-old boys in Sunday School. Some of them had not been attending regularly, and an inquiry resulted in finding that some of them preferred walking in the woods and digging out chipmunks on Sunday to attending Sunday School. In order to form a bond of common interest with these boys, I promised to take a stroll with them on each Sunday afternoon, and help them to study birds, flowers, and trees in a systematic and orderly way. One of the boys had a stub-tailed dog by the name of Spot. This Scotch terrier went with us the first time, but after that he was tabooed, because he would now and then scare up a rabbit, and our orderly walk was likely to degenerate into a rout. By making the dog stay at home and making the boys promise not to throw stones, we succeeded in keeping probably as orderly a crowd as other Sunday-afternoon strollers were.

The boys kept lists of the birds we saw on each trip. The number seen on each trip that we were able to identify was from twenty to twenty-five, the total number of kinds running somewhere between eighty and ninety. The following are some of the more interesting observations made.

Among the earlier visitants, we noted a pair of Black-capped Chickadees, and a Tufted Titmouse and his mate. Although these birds generally nest farther north, the above mentioned individuals stayed with us all summer. The Tufted Titmouse supposedly nested in a hollow somewhere in a large elm. At any rate, every morning during April and May, from 3.45 to 4 A.M., just at daybreak, the male bird might be heard in the top of the elm singing his "Peeler, peeler, peeler;" but at any other time of day he was entirely silent. The Chickadees gave their characteristic notes only when they first appeared in the spring. During the summer they were entirely silent, but very much in evidence, from time to time as they carefully searched our apple trees for insects. The last seen of the Chickadees, they had a large family of young in tow.

During the migrating season in the spring a number of Warblers were seen, but the only ones that would remain quiet long enough to be identified were the Black-throated Green Warbler and the Maryland Yellow-throat, or "Witchety" bird. This latter bird has been of very common occurrence.

Almost every time we went past a certain pasture, we saw a rusty-looking male Cowbird and his three wives walking along before the cattle.

We found two Cowbird's eggs in two different nests of Chipping Sparrows, and removed them. One of the eggs we put in a Robin's nest. Before going back on her nest, the female Robin held her head on one side and inspected the nest; then she deliberately pulled out the strange egg and

dumped it over the edge of the nest in just the same manner that a sitting hen will pull eggs around with her beak. The other Cowbird's egg was put into a Kingbird's nest, the nest being so deep that I thought it would be impossible for the birds to get the egg out over the edge. Both birds set up an uproar when they saw the strange egg in the nest, but they did not seem to know what to do. Next day, however, the broken remains of the Cowbird's egg were found beneath the tree, and an inspection of the nest seemed to indicate that the birds had made a hole in the side of the nest large enough to shove out the offending egg, and then afterward repaired the hole.

One day we saw a Sparrow building a nest in a wild rose-bush along the road. A female Cowbird was slyly looking on from some bushes near by. Next day the nest was completed, and contained a Cowbird's egg and a Sparrow's egg. A third chapter to this story was added three weeks later, when we came by and found two Sparrows feeding a large young Blackbird that was just learning to fly.

On one stroll, we found two old Killdeer with two half-grown young. The young were very swift of foot, and were run down after quite a chase. One of them ran into a creek and, to our surprise was perfectly at home in the water. It floated like a cork and, after it had paddled its way across, we took up the chase on the other side. The two young were finally coaxed to sit still on the hand, for inspection, while the old birds came within fifty feet of us and pretended to be badly wounded, standing on their heads in a curious manner and spreading out their wings. On our releasing the little ones, they all made for a swamp.

On Decoration Day my twelve boys and one older boy started at 4 A.M., in a spring wagon, for a day's outing at Greenville Falls, which is a fine resort for fishing, boating, swimming, and bird-study. On the way, we stopped to listen to a solo from a Black bird with a white back, which sat on a telegraph wire at the roadside, pouring forth a melody that resembled a chime of bells. The bird was identified immediately as a Bobolink. The boys noticed a plainer-looking bird along the fence, with yellowish stripes, and I told them that if it flew away with the soloist it must be its mate. The prediction proved correct. The Bobolink is rather rare in this locality. On this trip we found a Phoebe's nest by a bridge, and also several Orchard Oriole's nests, made entirely out of green grass. The black cape of these Orioles seemed to extend far down their neck and there was more chestnut than yellow in their plumage. They gave a note that sounded like "Keeler, Cooler, Cooler," which seemed to distinguish them from the Baltimore Oriole. We observed some grayish-looking Swallows entering a small opening in the side of a limestone cliff. The hole was so small and so dark that we could not see anything inside. What kind of Swallows were they?

We also tried to stalk a bird that said "pe-er-e-er-e-er-r-rl," all in one tone of voice ending in a rolling trill, sometimes with the ascending accent on

the end. This bird has been a mystery to us all summer. Although we have heard it very often on the hot summer days, we have never been able to get close enough to identify it.

We found several pairs of Dickcissels that chirped their song from tall weeds in the hay fields. They said: "*chip chip chip chip chip*." (do mi sol mi mi.)

We also thought that we identified the Savannah Sparrow that sat on a weed in similar fashion, singing "tsup, tsup," ending in an explosive sort of whistle or trill which it is impossible to indicate on paper.

The doings of the boys' club would fill a large volume, but, as indicative of the spirit of sympathy with wild creatures, let me relate just one more circumstance.

Having found some young Redbirds (Cardinals) just learning to fly, I asked the boys if they would like to take them home and try to raise them. They said yes, they would like to, but did not want "to disappoint the old birds."—C. C. CUSTER, *Piqua, Ohio*.

[This communication answers in a very practical way the inquiry of a teacher who wishes to know how to conduct outdoor excursions of young pupils in bird- and nature-study. The fact that the excursions described were made on Sunday afternoons has nothing to do with the value of the method employed. The class of twelve boys evidently saw things and got a great deal out of the trips besides needed exercise.

It would be useless, probably, to caution such classes against *chasing birds*, since it takes a well-seasoned observer to maintain perfect patience and self-control in moments of ornithological excitement.

However, it is well to remember that the quiet observer, who is willing to devote plenty of time to each observation, usually gets more, in the end, than the hasty, thoughtless person. Some day this class will find out to its satisfaction the Bank or Rough-winged Swallow, whichever species it happens to be, and the bird whose song did not disclose its identity. The apparent failures of a bird-walk are likely to be as valuable as the successes.—A. H. W.]

A BIRD-STUDY CLASS IN NORTH DAKOTA

About three dozen of our native birds are known to nest in the vicinity of our town and on the shores of the two small lakes near by. Robins, Meadow-larks, Song Sparrows, and Chestnut-collared Longspurs are some of the sweet singers we hear almost daily during the summer months. One of the very interesting species is the Bobolink, discovered near one of the lakes on an early morning in June. There were two males that sang, apparently not heeding us, and keeping only a few yards distant. That successfully hidden somewhere near were the nests and mother birds, we did not doubt. The gay summer dress and delightful song of the male Bobolink gave great pleasure to the Junior Audubon members, who made a majority of the party. Yellow-headed and Red-winged Blackbirds, Mourning Doves, Sandpipers, and Plovers were also seen on the same excursion. The Baltimore Oriole, Brown Thrasher, Wren, Yellow Warbler, and Maryland Yellow-throat are some of the inter-

esting residents of the other lake, during the nesting season. Barn Swallows are rare, and the scarcity of native Sparrows was noted this year. A Wood Duck made her nest in the cavity of a large tree in front of a summer cottage. Every day, for some time, she flew to and from the nest, but, as more people came to occupy the cottage, she finally left the nest. Just how many eggs she laid is not known. Crows are becoming numerous here.—MRS. C. D. BERLIN, *Wimbleton North Dakota*.

[The work of this bird-study class is exactly the right kind, and teachers elsewhere would do well to look up one or two accessible places frequented by birds, where they could go with their pupils in small parties, without too great fatigue or expenditure of time. Learn what *your particular part of Nature* has to tell you, is an excellent rule to follow. What someone else does in a different locality can never be precisely duplicated. Therefore, discover your own resources, and adopt the methods which can be most practically used with your own pupils. We shall be glad to hear more from North Dakota.—A. H. W.]

A WALK IN THE WOODS

I was hunting in the woods one day. I saw an old tree in the woods with a hole in it. I was going to climb up the tree. As I got up a little way it fell over with me. It was rotten. When I looked in the hole I saw three baby owls. They all tumbled out on the ground. Then I was sorry. But I did not know it was going to fall over with me. I set the stump up where the hole was. I put the little owls back into the hole. I fixed the stump up so that the wind would not blow it down. How queer they looked! I hope they grew up to be nice big owls.—HERBERT MORENZ (age 11), *Sea Side Ave., Eltingville*.

Once I was walking in the woods with a friend of mine. I saw a squirrel. I went up the tree after it. When I got up to the top of the tree, a mother squirrel ran out. I put my hand down into the hole of the tree. Five or six little flying squirrels came out. They flew to one tree, and when I got up that tree they flew to another tree. In this way they were in seven or eight trees. Two came to the ground, and we caught them. The rest got away. I took the two home and put them into a cage. I fed them all of the nuts that I bought at the store, but they would not eat for me. I left the door open a little bit. One morning I found they had gone.—EDWARD McCAFFERY (age 16), 137 *Giffords Lane, Great Kills, N. Y.*

One day I went for a walk into the wood. When I had gone a little way I saw a nest of baby rabbits. The mother ran as fast as a bullet. That was the way I found the nest. I also found a lot of turtle's eggs. I also found a quail's nest. It had six eggs. That winter I saw the quails. They were looking for food. My mother sent me over with chicken corn for them. They did not fly away when I threw them the corn. They ate it in a delicious way. A man

said, "The Quails call my name." That summer I heard them call it, "Bob, Bob, White." His name was Robert White.—THOMAS FLYNN (age 12).

[This exercise in composition, based on original observations, suggests another method of making use of the time allowed for bird- and nature-study in our schools. There is a very definite pleasure to be derived from describing what one has seen, heard, or done himself, and the spirit of this kind of pleasure is shown in these compositions.

The boy who "fixed the stump up so that the wind would not blow it down," the boy who "left the door open a little bit," when his caged squirrels would not eat, and the boy who carried "chicken-corn" to the hungry quail, are all boys who can be trusted to make friends with Nature. An experienced teacher, as I may have already told you, once said that we should not need to preach about kindness to animals to boys and girls if we would teach them to *know* outdoor life.

No Bird and Arbor Day message could be finer than the poet's call to the world of "joyous living things."—A. H. W.]

"Welcome back to your North-land,
Birds, to our hearts so dear!
Sorrowful were the summer
Without your songs of cheer.
We long for you when absent,
We'll cherish you while here."

From the *Return of the Birds*, by M. C. Bolles, Grass Range, Montana.



SPRING'S HERALD

(Photograph of Meadowlark by Guy A. Bailey)

THE WHIP-POOR-WILL

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET No. 73

While walking along a country road one evening after the sun had set, and darkness had all but fallen, I suddenly discovered some object on the ground a few yards ahead. At almost the same moment it rose, and, on slow-moving wings, flew over the fence and disappeared in the gloom of the woods. The flight was so silent, and the wings were so broad, it was difficult to believe that it was not a great moth that had just departed from view. I knew, however, that I had disturbed a Whip-poor-will in the midst of its twilight dust-bath. Evidently it had been trying for several minutes to find just the right spot, for there in the soft earth were three slight but distinct hollows, such as only a dusting bird would make.

Soon afterward I heard it calling, or perhaps it was its mate, *whip-poor-will*, *whip-poor-will*; the shouts came ringing through the darkness, six, eight, or perhaps twenty times repeated. Then, after a pause, the plaintive but stirring notes would again come up from the old apple orchard, and fill all the space round about the farm-house.

The Song

The still summer night seemed to belong to this strange bird of the shadows, for its rhythmical cry took possession of the silences, and filled the listener with contented exhilaration. All attempts to approach it that night were futile, for its big, bright eyes evidently penetrated the shadows with ease, and, long before we could even make out its form, it would fly to another perch several rods away. Only when it announced its presence by calling did we know its new position. Two or three times, however, we came near enough to hear the low note, something like *chuck*, which immediately precedes the first loud *whip* of its song.

Ernest Ingersoll, in his book "Wit of the Wild," says that a Whip-poor-will, while singing, "will often make a beginning and then seem to stop and try it over again, like a person practising a new tune; but these interruptions really mean so many leaps into the air, with perhaps frantic dodges and a somersault or two, for the snatching and devouring of some lusty insect that objects to the process." We listened for this, but all the calls we heard were complete throughout each performance. It was fully two hours after the sun had set before the last note of this mysterious night-flyer was heard. Just before dawn it called again several times, and the farmer's wife said she feared it was sitting on the stone door-step. She was somewhat disturbed about this, and intimated that if it were there the action would bring sorrow to the household. It seems odd

Stops Singing
To Eat



WHIP-POOR-WILL

Order—Macrochires
Genus—Antrostomus

Family—Caprimulgidae
Species—*Vociferus vociferus*
National Association of Audubon Societies.

that people should be superstitious about anything so harmless as a bird, but in rural communities one often finds people who believe much ill luck may happen to them if a Whip-poor-will sings too close to the house. If they were better acquainted with this gentle feathered creature, they would surely know that nothing evil could come from it.

Many more people have heard this bird call than have ever seen it; for, like the owl, its day begins only when the sun goes down, and before the sun comes up again it has settled to sleep on the dead leaves that cover the ground in the thicker parts of the woods. It appears never to give its call during the daytime. While hunting for wild flowers, you will sometimes come upon its hiding-place. It must sleep with one ear open, for the bird seems always to hear you before you see it, and, on silent wings it will rise and fly quickly out of sight among the bushes.

If such an experience should happen to one in the month of May or June, it is quite worth while to search the leaves very carefully, for you may have

The Nest stumbled upon its nest, which, in reality, is no nest at all, but is simply a place on the leaves which the mother-bird has chosen to be the temporary home of her little ones. The mildly spotted, cream-colored eggs so closely resemble the faded, washed-out, last season's leaves on which they are lying that it takes a sharp eye, indeed, to find them. So one should proceed slowly, lest an unfortunate step might crush the two little oblong beauties. Usually one is not quite certain of the exact spot from which the bird flew. On such occasions I sometimes place my hat or handkerchief on the ground near the place, and, like a dog hunting for a lost trail, begin to walk around the spot, increasing the circle constantly as I go. By this means, sooner or later, one will be pretty sure to find the eggs if they are there.

If, when the bird flies, it soon comes to the earth again, and appears to be suffering from sudden injury, you may be sure that it has a secret that it is trying to keep from you, and, by feigning a broken wing, it hopes you will follow in an attempt to capture it. If you approach the bird, it will fly before you a few yards at a time until, having led you away a safe distance from the nest, it will suddenly recover, and, rising strong on the wing, you will see it no more. Doubtless the eggs are often saved from destruction in this way; for a hunting dog, fox, or 'coon, will seek to catch the bird, and entirely overlook the presence of eggs or young.

If the eggs have hatched, you will need to look even closer if you are to be rewarded. The two little Whip-poor-wills, with their soft, downy coats, will lie motionless on the leaves, without even so much as an eyelid moving to betray their presence. Their coloring, too, blends so wonderfully with their surroundings that I sometimes wonder if any enemy is ever able to find them.

In many of the southern states lives the Chuck-will's-widow, which also bears the name given to its call. It is larger than the Whip-poor-will, but, like it, is nocturnal in its habits. So closely do the two birds resemble each other, both in physical structure and in habits, that naturalists tell us they are near relatives, and, in fact, they classify them as belonging to the same family. Many of the people who live in the forests where these birds are found do not know much about the scientific study of birds, and usually believe that these two night-prowlers are one and the same birds. They will tell you that the Chuck-will's-widow is the male Whip-poor-will.

Down in the lake country of central Florida, as a boy, I used to listen to the Chuck-will's-widow calling on summer nights. When the winter months came, however, the cries that came up from the deep woods of an evening were different; for at that season these birds were all gone, and their places taken by Whip-poor-wills, which had arrived from the more northern states to pass the winter where snows never fall, and frost seldom comes.

Another closely related bird is often confused in the public mind with the Whip-poor-will. This is the Nighthawk, or "Bull-bat." Very many persons think there is no difference in these birds, but there is a marked difference, both in appearance and habits. The Nighthawk's wings are much longer, and, when folded, reach well beyond the end of the tail, while the Whip-poor-will's wings do not extend even so far as the end of the tail. The Nighthawk flies about in the early evening, long before sunset, and may sometimes be seen, even at noontime, hawking about for insects. It often feeds hundreds of feet in the air, and may remain on the wing for an hour or more at a time. On the other hand, its cousin of the shadows only comes out of its seclusion so late in the evening that it is difficult to see it, and it captures its food by short flights near the ground.

The Whip-poor-will, and the other two birds I have mentioned, belong to the family of birds called Goatsuckers. They have very weak feet and legs, and so move very slowly and feebly when on the ground. They sit lengthwise on a limb, fence-rail, or other object on which they chance to perch, and very rarely use the crosswise position so commonly adopted by the perching birds. The mouth in this group is one of the wonders of the bird-world because of its enormous size. All around the upper lip is arranged a series of long, stiff, curving hairs, which form a sort of broad scoop-net in which the bird entangles and seizes its insect-prey, for it always feeds while on the wing, and the agile gnats and moths might often be able to dodge or slip out of the very small beak possessed by these birds were it not for the wide fringe of bristles.

Few birds are more valuable to the farmer than is the Whip-poor-will. It never does him any harm in any way, for it does not eat his cherries and strawberries, nor does it pull up his newly planted corn, nor eat his millet seed. It does not fill up the drainage-pipes of his house with sticks and leaves, does not eat his chicken-feed, nor catch

Its Nighthawk
Cousin

Its Food

his young poultry. What it does do for him is to eat the insects that lay the eggs that hatch into caterpillars and destroy the leaves of shade and fruit trees. May-beetles and leaf-eating beetles are destroyed by it also. In truth, fortunate, indeed, is the grower of grain, or the raiser of fruit who, during the spring and summer nights, has one or more pairs of these birds about his place, for all during the hours when the farmer sleeps the Whip-poor-will is busy ridding his place of these harmful insects.

Mr. Ingersoll says: "They never regularly sweep through the upper air, as does the Nighthawk, but seek their food near the ground by leaping after it in short, erratic flights. They have a way of balancing themselves near a tree-trunk or barn-wall, picking ants and other small provender off the bark; and even hunt for worms and beetles on the ground, turning over the leaves to root them out. It is not until their first hunger has been assuaged that one hears that long steady chanting for which the bird is distinguished, and which, as a sustained effort, is perhaps unequaled elsewhere."

In the early autumn, the Whip-poor-wills simply disappear without warning. As they reappear far to the south, we know, of course, that they have migrated, but when did they go and how? Did they journey over the hundreds of miles of intervening space by short flights, or did they mount high in air as do many small birds, and fly swiftly for long hours at a time? Did they go singly or in flocks? These and other questions about this mysterious bird of the night remain to be answered fully. Perhaps some younger reader of this paper will grow up to be the naturalist who will explain these things more fully to the less observant students of birds.

No one should ever kill one of these useful birds. Its great value to mankind has become generally recognized in recent years, and the laws of all the states where the bird is found provide that any one who kills a Whip-poor-will shall be fined or imprisoned.

CLASSIFICATION AND DISTRIBUTION

The Whip-poor-will belongs to the Order *Macrochires* and the Family *Caprimulgidae*, and its scientific name is *Antrostomus vociferus vociferus*. It ranges through eastern North America, breeding from the St. Lawrence Valley and Nova Scotia south to northern Georgia and Louisiana, as far west as the border of the Plains; it winters from the South Atlantic and Gulf Coast to British Honduras. The only other subspecies is *macromystax*, of Mexico and the adjacent border of the United States.

NOTE.—Additional copies of this and other educational leaflets may be obtained for 2 cents each from the National Association of Audubon Societies, 1974 Broadway, New York City.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City

WILLIAM DUTCHER, *President*
FREDERICK A. LUCAS, *Acting President* T. GILBERT PEARSON, *Secretary*
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Any person, club, school or company in sympathy with the objects of this Association may become a member, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5.00 annually pays for a Sustaining Membership
\$100.00 paid at one time constitutes a Life Membership
\$1,000.00 constitutes a person a Patron
\$5,000.00 constitutes a person a Founder
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MR. DUTCHER HONORED

Mr. William Dutcher, President of the National Association of Audubon Societies, was recently awarded the gold medal of the Camp-Fire Club of America. The presentation was made at his home in Plainfield, New Jersey, on January 21, 1914, with a simple but most impressive ceremony. On the medal was engraved, "To William Dutcher, Founder of the National Association of Audubon Societies, for his work in preserving American birds." The Committee of the Camp-Fire Club, which journeyed to Plainfield to perform this pleasant duty, consisted of Mr. William E. Coffin, President; Mr. Edmund Seymour, Treasurer; and Dr. William T. Hornaday. By invitation, the Secretary of the Association also accompanied them. Mr. Seymour read to Mr. Dutcher and to the friends assembled warm letters of appreciation from Mr. Ernest Seton, Mr. Rex Beach, and Mr. Irving Bacheller. In giving Mr. Dutcher the medal, Dr. Hornaday, speaking for the Camp-Fire Club, thus concluded his address: "With this token, the Club sends congratulations to you for the great work you have done and the place you have won in the hearts of your countrymen, and its prayers for your complete restoration to health." Mr. Samuel T. Carter, Jr., replied with an address of thanks in behalf of Mr. Dutcher.—T. G. P.



MEDAL AWARDED TO MR. WILLIAM DUTCHER

FEEDING THE BIRDS

On February 16, two days after the great storms of February–March, 1914, began, telegrams authorizing the expenditure of funds were sent from the office of the National Association to Audubon workers throughout the snow-bound states, asking them to call on the public to feed the birds. Agents were authorized to expend sums varying from \$10 to \$100, to start the work. Responses were immediate, as the following brief statements show:

CONNECTICUT.—Appeals for personal service and financial aid were printed in newspapers throughout the state, and were followed vigorously by subsequent articles in some papers, especially those of Bridgeport, thanks to the energy of Miss Spalding and her fellow-members of the local Audubon Society. Large quantities of bird-food were purchased and dispensed by the Society and by private means. Many mail-carriers in the Rural Free Delivery service cheerfully carried bags of buckwheat, and scattered it along the routes with special reference to the Quail. Another striking evidence of public spirit was evinced by a water-company, which provided hundreds of pounds of grain, suet, and ground bone, and had its workmen distribute it intelligently throughout the large wooded area surrounding its reservoirs.

ILLINOIS.—The newspapers spread far

and near the State Society's appeal for help for the birds, and its president sent out 2,000 instructive post-cards.

INDIANA.—Under the impulse of the secretary of the State Society, Elizabeth Downhour, patrols of Boy Scouts at Fort Wayne, the students at Teachers' College, Indianapolis, and many other helpers, were soon busy, proving that the people of Indiana generally were wide awake to their duties and privileges.

MAINE.—The State Society's appeal to the press, with instructions, was widely published.

MASSACHUSETTS.—The press and people responded generously to the call for work, the Boy Scouts, Camp Fire Girls, and other clubs of young people exerting themselves everywhere, as the records show.

NEW HAMPSHIRE and VERMONT.—Similar methods and kindly energy brought excellent results.

NEW YORK.—A widespread and urgent appeal was voiced by the press, and a vast amount of rescue-work was done, especially in reference to Ducks and upland game-birds.

VERMONT.—The press repeated the warnings sent them, with good effect.

VIRGINIA and WEST VIRGINIA.—Great publicity was obtained and much beneficial work promptly accomplished.



THOUSANDS OF SCAUP DUCKS WINTERING IN SAFETY AT DAYTONA, FLORIDA

TWO INTERESTING CASES

Mr. C. E. Brewster, Game Law Expert of the United States Department of Agriculture, who has been doing such splendid work for a number of years in enforcing the federal regulations in reference to the interstate shipment of game, is continually making interesting discoveries. Two of these are referred to in the following communication recently received from him. The big gun to which he refers is a type of the enormous weapons which have long been used by the pot-hunters in certain regions along our Atlantic coast. The value of one of these guns to the market hunter lies in the fact that it can throw shot to a far greater distance than an ordinary fowling-piece and, further, the quantity of pellets which it hurls at a single discharge is capable of producing enormous execution on a flock of feeding wild-fowl. The "duck scaffold" is an ocular demonstration of the length to which bird-butchers will go in order to defeat the law, as long as there is an open market for wild game-birds. Mr. Brewster writes:

"In December, 1913, two officers of Washington, D. C., saw a man start out from the Virginia shore in a skiff. They intercepted him, and found in his boat a gun 8 feet 6 inches long, of an inch and five-eighths caliber, weighing over 100 lbs., loaded and placed ready for firing. He had with him, too, a double-barrel ten-gauge gun, also loaded. They drew the load out of the big gun, and found it consisted of a half-pound of flashing powder and a pound of small buck-shot. It would appear that the man was going duck-hunting with this destructive weapon. Since that time, the Biological Survey has been conducting a general investigation, and we now have the record of eleven big guns owned on the Potomac River, some of them more than 10 feet in length. If Virginia and Maryland, following the example of other states, enact laws making it unlawful to have these guns in possession, we shall have no trouble in finding them."

"Another matter that may interest you is in connection with the duck-trappers of Virginia. After we had made successful prosecutions in the federal courts, two years ago, against these Virginia parties, for shipping trapped ducks, they hit on the plan of tying up a bunch of dead ducks, after they had taken them from the traps and killed them, and shooting a load of fine shot into them at close range. They would then claim, in case the shipments were intercepted, that the ducks were legally killed. (You will remember that the Virginia law provides that ducks legally killed may be shipped out of the state.)

Late in 1912 we intercepted a shipment going from Virginia to Maryland. We took a number of pairs and had them picked, and, of course, discovered the shot marks; but the ducks had previously been killed by piercing the head with a sharp instrument. Eichelberger and Bradford, the shippers, were convicted and heavily fined, this being their second conviction. Immediately the trappers arranged to take the birds from their traps, tie them up in bunches, *and fire shot into them while alive.*

Last month, with two men in our employ, I made a trip along the eastern shore of Virginia. Off Quinby we found the apparatus or scaffolding used for tying up these birds to shoot. I am inclosing you a photograph of it. You will readily see that it has been used some."

Christmas Trees for Birds

There comes from the Audubon Society in Buffalo a novel suggestion, to be noted for use by bird-lovers next winter. This is, that after the children's Christmas trees have served their pretty purpose they be not thrown away or burned, but planted in some suitable place near the house, and loaded with food for the winter birds. This plan offers many advantages over merely scattering the food, or placing it on some shelf accessible to cats, etc.



CHARLES E. BREWSTER AND CAPTURED
"BIG GUN"



SCAFFOLD FOR EXECUTING LIVE
DUCKS IN VIRGINIA

ALBERT WILLCOX, BENEFACTOR

Albert Willcox, whose magnificent bequest to this Association first placed it on a permanent financial basis, was, in many ways, a most interesting man. He was born in New York City, on February 15, 1847, but spent most of his childhood and youth on his father's farm on Staten Island. At the age of 16 he went to work for a drygoods firm in New York City. His father had a small insurance business, and the two joined later in it under the firm-name of A. W. Willcox & Company, and embarked in fire and marine insurance brokerage. On the death of his father, several years later, he became associated with a younger cousin, William G. Willcox, under the firm-name of Albert Willcox & Company; a partnership which terminated only upon the death of the senior member, twenty years later.

Albert Willcox accumulated a considerable fortune, which he used liberally during his lifetime and distributed generously at his death. He was a large, strong man, and succeeded in life by his indomitable perseverance.

He first became interested in the Audubon movement by seeing some notice of its work in a newspaper. He at once went to see Mr. Dutcher, then Chairman of the National Committee of Audubon Societies, and after inquiring thoroughly into the work of the Committee, and especially as to just how the funds were expended, he offered to assist financially.

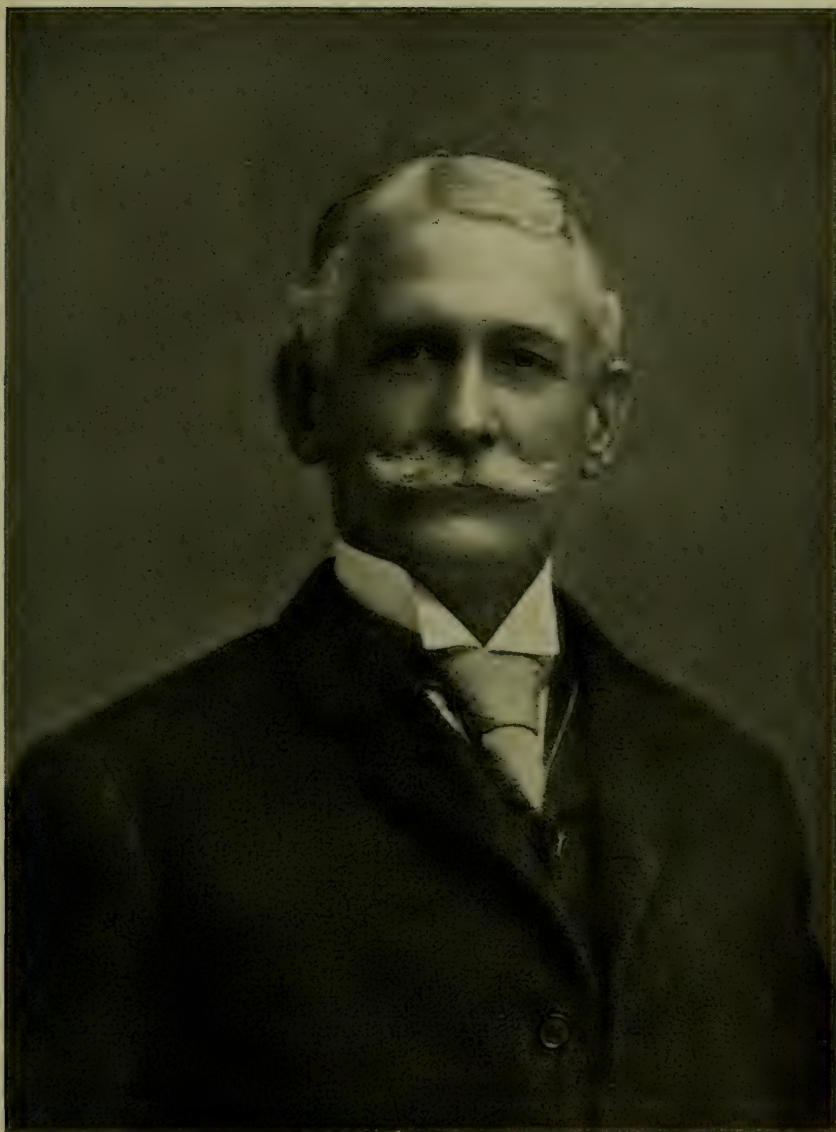
I well remember when I first met him, in the autumn of 1904. Mr. Willcox had contributed money to the National Committee the year before, and had recently stated to Mr. Dutcher that if some young man should become connected with the movement as financial agent, he would personally pay the necessary salary and expenses. I was living in North Carolina at the time, and, summoned by a telegram from Mr. Dutcher, came to New York and had an interview with Mr. Willcox. He impressed me as a very frank, straight-forward business man, on whose mind two things bore heavily,—

one the need of educating the Negro in the Southern States, and the other a desire to see better means adopted for preserving the wild-bird and animal life of the country.

At the termination of our interview, we went to Mr. Dutcher's office, and Mr. Willcox agreed to provide the Association with \$3,000 annually, in order that I might give half of my time to advancing its work. This he continued to do until the time of his death, which occurred on August 13, 1906, in his fifty-ninth year.

He had always been intelligently interested in the achievements of the National Association, which had in the meantime become incorporated, but never attempted to take any active part in the details of the work. By his will, the Association was made the beneficiary to the extent of \$331,072. The Board of Directors at once made of this the beginning of a permanent endowment-fund for the Association, and provided that only the interest from the same should ever be used for current expenses. Thus Mr. Willcox enabled the directors to place on a permanent basis, for all time to come, the work of the National Association of Audubon Societies.

Mr. Willcox was a man of great modesty, and while he lived he would never permit his name to be published in connection with his contributions. Whenever he was approached on the subject, he would always declare most emphatically that he did not want personal advertisement, but that with all his heart he did desire to see the wild life of the country preserved. He was interested not only in bird-protection but in the preservation of other wild animals as well, and it was in response to his suggestion that the scope of the Audubon work was broadened to include wild animals as well as birds. Mr. Willcox had the utmost faith in the growth of the Audubon movement; and he desired that his gifts be used chiefly for securing additional support for the Association's working-fund.—T. G. P.



MR. ALBERT WILLCOX
Benefactor of the National Association of Audubon Societies

FLORENCE A. HOWE: AN APPRECIATION

When, seventeen years ago, the Indiana Audubon Society was founded, it began to promote the organization of local societies in various towns in the state.

A few of the friends of the birds in Indianapolis organized such a society, and made me its president. It was my thought that, if we could extend our work into the schools, we could educate the children to know and value birds; and also that it would be well to interest the newspapers of the city, so that the attention of the public might be attracted to whatever was accomplished. The scheme worked well. The superintendent of schools was much interested in local ornithology, entered into the spirit of what we sought to do, and facilitated our efforts. Very soon, one or another of us was constantly called upon to visit the schools and talk to classes about birds. The newspapers very heartily responded to our request to give publicity to what was being done, and these notices attracted the attention of Miss Florence A. Howe, a lady who had been a school-teacher, and a lover of the birds. One day Miss Howe introduced herself to me, and said that she had read accounts of our work, and would like to be one of us. Of course, I welcomed her to our fold; and because of her experience as a teacher, and intense interest in the cause of bird-protection, she became and continued a most effective worker in the schools of Indianapolis and its vicinity.

Miss Howe soon became a member of the State Society, was elected its secretary, and for several years was the leading spirit in the work of that organization. Her work was so effective as to attract the attention of the United States Department of Agriculture, and soon to make her well known throughout the entire country. She was one of the most energetic and industrious women that I have ever known—energy and industry that were not expended for a selfish purpose, but rather for the comfort of her family and friends, and for the advance-

ment of the cause of bird-protection. One would expect such a person to be of a sunny and cheerful disposition, and she exceptionally illustrated these qualities. Her presence made happy everyone with whom she came in contact. It was evident before the annual meeting of the State Society, in 1912, that her health was failing, and, at her request, she was relieved from the duties of the office which she had so well and conspicuously filled. She was, however, continued as a member of the executive committee, and regularly attended its meetings until within a few days of her death, which occurred, very suddenly, on July 9, 1913, bringing to a close a life full of disinterestedness and Christian character.—
WILLIAM WATSON WOOLEN.

A Thank-offering to Gulls

A monument absolutely unique in character and purpose was unveiled in Salt Lake City, Utah, on October 1, 1913—a monument to the Gulls that saved the first settlers from famine. No wonder that it is inscribed as "Erected in Grateful Remembrance of the Mercy of God to the Mormon Pioneers."

The incident so strikingly commemorated happened in the summer of 1848, when flocks of Gulls came to the settlers' fields from the lake, and made successful war on the hoards of "crickets" (grasshoppers) that were destroying the crops. Mrs. E. B. Wells, said at the unveiling:

"It is a poetic coincidence that our idea of national freedom from oppression, and our idea of state deliverance from starvation, should be presented by birds. The eagle, majestic monarch of the air, is represented on shield, and coin, and tablet of bronze, all over the broad land. The gentle Gull, humble habitant of the shores of our great salt sea, has found shrine heretofore only in the grateful memories of this valley's pioneers and descendants. My heart swells with thanks-

giving that we are now to preserve in sculptural art the miraculous incident we all know so well; and I now have the honor to unveil this beautiful monument to the eye and admiration of grateful thousands now living, and of untold thousands yet to come."

President Smith, of the Mormon Church, said, among other things:

"I am only relating what I saw. Whenever the Gulls had been filled to capacity, they would fly to the banks of the creek and there disgorge the dead pests, which lay along the stream in piles, many of which were as large as my fist. These piles literally covered the banks of the creek. After the crickets had been so nearly destroyed that they began to shelter themselves wherever they could from the attacks of the Gulls, the birds became so tame that they followed under our wagons as we drove along, into our yards, and under every shelter where the crickets sought protection from them. With the help of the Lord, we were able to reap, that fall, a fairly good harvest."

The monument is the work of Mahonri M. Young, a grandson of the Mormon pioneer, Brigham Young, and is said to have cost \$40,000. It consists of a granite column more than fifteen feet high. Upon the top of this there rests a great ball, upon which two Gulls of gilded bronze seem to be just alighting. The square pedestal bears four historical bronze plaques in high relief; and is surrounded by a fountain forty feet in diameter, in which water-lilies grow and gold-fish swim, and where song-birds may quench their thirst.

Think for a moment of the difference between the sentiment held by the Mormons for the Gull and that entertained by the Louisiana Legislature years ago, when they passed a law taking all legal protection away from this family of birds, on the ground that they ate fish! What if they do eat fish? Surely the good Creator made enough fish for us and the birds too. And fish is not all they eat, as any Utah man will gratefully testify. It is a perfectly truthful statement that America

holds no native bird which does not have its part to play in the great economy of nature; and the world would be the worse were any one of them to disappear.

Ernest Ingersoll

Mr. Ernest Ingersoll, well known as a writer on natural history, has become connected for a time with the home-office of the National Association in the capacity of assistant to the Secretary. The office has become a regular clearing-house for questions and information relating to natural history, and the correspondence increasingly required in this direction has already outgrown the limited time the Secretary is able to devote to this subject. Mr. Ingersoll will assist him in this and other phases of the work. It is hoped that some of his time may also be devoted to giving public lectures in response to the almost incessant calls for such service.

Among the more popular of Mr. Ingersoll's books relating to outdoor life are, "Wild Neighbors," "Wild Life of Orchard and Field," "Nature's Calendar," "The Wit of the Wild," and "Animal Competitors," the last named, an account of North American mammals in their economic relations to agriculture and fur-growing. In his "Life of Mammals," the public has a standard work on the four-footed animals of the world. Mr. Ingersoll had charge of the zoölogical department in both the New International and Nelson's encyclopedias; was for several years on the editorial staff of the Standard Dictionary; and is now editor of the Farmers' Practical Library. His writings have also appeared in many of the popular magazines published in this country.

Enforcing the New Federal Law

The following is from a news-letter recently given out by the United States Biological Survey, bearing the signature of T. S. Palmer, Assistant Chief.

"During the past four months, work under the migratory-bird law has been pushed as rapidly as the limited means at



THE MONUMENT TO SEA-GULLS AT SALT LAKE CITY



BRONZE PLAQUES OF THE PEDESTAL OF THE GULL MONUMENT

Top at left; north plate, containing dedication; right, east plate, pioneers' arrival. Below left; south plate, despair, hope, and arrival of the gulls; right, west plate, the harvest.

the disposal of the Biological Survey would permit. Unexpected obstacles have delayed the organization of the field-force in some of the states, and in a few cases it has been impracticable to act on the recommendation for the appointments of deputies to coöperate in this work, which were made some time ago by certain commissions. The department now has a force of 129 wardens in the field, organized under the direction of eight district inspectors and two special agents. These wardens are distributed in twenty-seven states, chiefly in the Middle States, the Mississippi Valley, the Great Basin, and on the Pacific Coast. In the East, the department is actively coöperating with local authorities, to prevent undue destruction of wild-fowl by the practice of night-shooting and trapping. Several arrests and convictions have been secured for shooting at night on the upper Chesapeake.

"More than 125 convictions have been thus far reported, although returns have been received from comparatively few of the states. Every case thus far prosecuted in the Federal courts has resulted in conviction and the imposition of a fine. The first case in a Federal court was reported from California, where a notorious market-hunter was arrested under a Federal warrant for shooting after sunset, was taken to San Francisco, and convicted and fined. As most of the offenses under the Federal regulations involve a violation of state law, a majority of the cases have been prosecuted in the state courts, where some heavy penalties have been imposed. The largest number of convictions have been reported from New York, New Jersey, and Oregon. The heaviest fines reported in the state courts have been: In New York, \$50 for possession of a Meadowlark; in Oregon, \$25 with confiscation of gun and boat, for shooting after dark; and, in New Jersey, eight fines of \$100 or more, including one of \$200 and one of \$300, for killing insectivorous birds. Several cases involving the killing of birds protected for five years under the Federal regulations have

been prosecuted. Killing a Swan on the Chesapeake cost the offender \$100; killing a Killdeer Plover in New Jersey resulted in a sentence to jail for nine days."

New Members

From January 1st to March 1st, 1914, the Association enrolled the following new members:

Life Members.

Arnold, Benjamin Walworth
Beech, Mrs. Herbert
Bennett, Mrs. Edward B.
Borden, Miss Emma L.
Case, Miss Louise W.
Dows, Tracy
"E. D. T." (In memoriam)
Forbes, Mrs. William H.
Gladding, Mrs. John Russell
Hentz, Leonard L.
Kittredge, Miss Sarah N.
Mallery, Mrs. Jane M.
Mason, George Grant
Mershon, Hon. W. B.
McClymonds, Mrs. A. R.
Newman, Mrs. R. A.
Peabody, George A.
Perkins, Miss Ellen G.
Pierrepoint, Mrs. R. Stuyvesant
Renwick, Mrs. Ilka H.
Roberts, Miss Frances A.
Russell, Mrs. Gordon W.
Schley, Grant B.
Tingley, S. H.
Wallace, Mrs. Augusta H.
Wyman, Mrs. Alfred E.

Sustaining Members.

Adler, Max A.
Andrews, Miss Kate R.
Barfield, Josiah
Barker, Miss Emeline L.
Barton, Mrs. Warner J.
Beckwith, Jr., Mr. Truman
Bird Society of the Misses Shipley
School
Bloomingdale, Miss Laura A.
Bolter, Miss Alice E.
Bonnett, Charles P.
Bradley, George J.
Brakeley, Joseph
Brewster, Mrs. Horace C.
Briggs, Frank H.
Brill, Dr. A. A.
Brookline (Mass.) Bird Club
Brown, J. Adams
Buchanan, R. P.
Burgess, John A.
Burrall, Mrs. Mary E.
Burritt, Mrs. C. P.
Chautauqua Bird and Tree Club

Sustaining Members, continued.

Civic League of Florence, S. C.
 Clarke, Miss Elizabeth
 Colon, George Edward
 Comstock, Mrs. Richard B.
 Cooke, Mrs. H. P.
 Cooper, Miss Theresa B.
 Cowd, Mrs. Henry
 Dana, Mrs. E. S.
 Davol, Charles J.
 Dittmann, Mrs. A. J.
 Doepke, Mrs. W. F.
 Drewry, L. D.
 Eaton, Mrs. D. Cady
 Edwards, Miss Helen C.
 Ellison, Secretary
 Ellison, J. Huyler
 Ferguson, Mrs. Walton
 Florence, S. C., Council of
 Fox, Mrs. Joseph M.
 Fray, John S.
 Gardner, Mrs. George Warren
 Gates, Mrs. John
 Gilbert, Miss Nellie
 Gilbert School, The
 Gill, Mrs. K. F.
 Gilman, Miss Caroline T.
 Goehring, J. M.
 Godfrey, Mrs. W. H. K.
 Greene, Arthur D.
 Griswold, Miss Florence
 Hanna, Jr., Mrs. H. M.
 Harris, George W.
 Harrison, Harry W.
 Hatch, Mrs. H. R.
 Hauck, Louis J.
 Heyn, Otto P.
 Hopekirk, Mrs. Helen
 Hoyt, N. Landon
 Hubbell, Miss Helena
 Hutzler, George H.
 Jacobus, John S.
 Johnson, Rev. Alfred E.
 Johnson, Mr. and Mrs. H. H.
 Jones, Miss Amelia H.
 Leigh, Mrs. R. Walter
 Lewis, A. N.
 Lindsay, Mrs. J. W.
 Lloyd, N. Ashley
 Lord, Mrs. A. M.
 Mathewson, E. P.
 Maurer, Mrs. Oscar
 Merrill, L. K.
 Mildrum, Henry G.
 Miller, Mrs. Elizabeth C. T.
 Mitchell, Mrs. William
 Morgenthau, Mrs. M. L.
 McCampbell, Theron
 McNiel, Miss Ruth E.
 Neilson, Miss Emma C.
 Nelson, Miss Helen D.
 Newcomb, Jr., C. A.
 New Smyrna Board of Trade
 Newton, Mrs. Francis
 O'Brien, David

Sustaining Members, continued.

Onondaga County Audubon Society
 Pagenstecher, Miss Friede
 Paris, Mrs. F. U.
 Pearl, Mrs. Frank H.
 Pell, James D.
 Pfeiffer, Curt G.
 Piek, Mrs. W. F.
 Porter, Mrs. Clarence
 Potter, Alonzo
 Potts, Mrs. William M.
 Preston, Mrs. Walter Lane
 Putnam, Miss Elizabeth
 Quincy, C. F.
 Rand, Mrs. Charles E.
 Rebasz, Mrs. Wm. Mortimer
 Research Club of Florence, S. C.
 Rice, Miss E. Josephine
 Riglander, Mrs. Moses M.
 Roberts, Mrs. Coolidge S.
 Rodewald, F. L.
 Ruperti, Justus
 Salisbury, Mrs. E. MacCurdy
 Scribner, Mrs. Arthur
 Seward, Miss A. D.
 Siedenburg, Jr., Mrs. R.,
 Skeel, Mrs. Frank D.
 Strong, E. W.
 Swann, Mrs. A. D.
 Swinnerton, Mrs. J. A.
 Tanenbaum, Moses
 Thayer, Miss Ruth
 Thompson, Raymond B.
 Tompkins, Miss Elizabeth M.
 Townsend, Jr., J. B.,
 Troubetzkoy, Prince Pierre
 Trussell, Arthur J.
 Tucker, Miss Abbie
 Tyler, Mr. and Mrs. W. S.
 Van Name, Ralph G.
 Wallis, Mrs. Hamilton
 Weil, Charles S.
 White, C. H.
 White, Roger S.
 Wiard, Mrs. F. Louise
 Wilcox, Mrs. Ella Wheeler
 Wilcox, Mrs. Frank L.
 Williams, Miss Elizabeth G.
 Wilson, Mrs. Henry B.

New Contributors

Adams, Charles Quincy
 Ault, L. A.
 Brandegee, Miss Florence S.
 Brandegee, Miss Katharine
 Brookes, Mrs. Frank
 Collins, Mrs. Atwood
 Cox, Mrs. Brinton
 Dawes, Miss Emily M.
 DeForest, Henry W.
 Dennis, Arthur W.
 Dickinson, Charles
 Edwards, Miss Elizabeth S.

Edwards, Henry A.
 Emerson, Mrs. G. D.
 "F.O."
 Greer, Austin M.
 Griffin, Mrs. Solomon B.
 Hall, Mrs. John H.
 Harris, Miss Frances K.
 Haskell, Miss Helen P.
 Hopkins, James
 Hussey, Wm. H.
 James, Miss Ellen F.
 Jamison, Charles A.
 Jenks, Mrs. Wm. H.
 Lawrence, John B.
 Mitchell, James T.
 McMurray, Miss B. E.
 O'Connor, Mrs. Ruth Davis
 Paine, 2nd, Mrs. R. Treat
 Patterson, T. H. Hoag
 Perkins, Mrs. George W.
 Priest, Miss Electa M.
 Richardson, Mrs. Geo. F.
 Rogers, Mrs. Hubert E.
 Russell, James Townsend, Jr.
 Schlaet, Mrs. Annette Vail
 Shaw, Mrs. G. H.
 Sherman, A. L.
 Stanley, Mrs. Mary R.
 Van Brunt, Mrs. Charles
 Wakeman, Miss Frances
 Wallace, Miss Harriet E.
 White, Marcus
 Wilbour, Mrs. Charlotte B.
 Winthrop, Grenville L.

Contributors to the Egret Protection Fund

Below is given a list of the contributors
to the Egret Protection Fund for 1914
received before March 1:

Previously acknowledged... \$554 04
 Abbott, Holker..... 1 00
 Abbott, Mrs. T. J..... 3 00
 Adams, Miss Emily Belle.... 1 00
 Adams, William C..... 1 00
 Allen, Miss Mary P..... 15 00
 Althouse, H. W..... 5 00
 Ames, Mrs. J. B..... 5 00
 Anonymous..... 5 00
 Asten, Mrs. Thomas B..... 5 00
 Babson, Mrs. Caroline W..... 1 00
 Barclay, Miss Emily..... 2 00
 Barnes, R. Magoon..... 10 00
 Barri, Mrs. John A..... 5 00
 Barry, Miss Anna K..... 2 00
 Bartol, E. F. W..... 10 00
 Bartol, Mrs. J. W..... 25 00
 Baxter, Miss Lucy W..... 5 00
 Beebe, C. K..... 2 00
 Beebe, Mrs. Wm. H. H..... 2 00
 Beckwith, Mrs. L. F..... 5 00

Amount carried forward.....\$664 04

Amount brought forward.....\$664 04
 Benjamin, Mrs. John..... 5 00
 Bergfels, Mrs. Henry..... 1 00
 Bernheimer, Mrs. J. S..... 10 00
 Bignell, Mrs. Effie..... 1 00
 Birch, Hugh T..... 10 00
 "Bird Lover"..... 5 00
 Blackwelder, Eliot..... 1 00
 Boggs, Miss M. A..... 5 00
 Bole, Ben P..... 10 00
 Bonham, Miss Elizabeth S..... 5 00
 Bonham, Mrs. Horace..... 10 00
 Bowdoin, Miss Edith G..... 10 00
 Bowdoin, Mrs. George S..... 20 00
 Boynton, Mrs. C. H..... 1 00
 Braman, Mrs. Dwight..... 12 00
 Brent, Mrs. Duncan K..... 2 00
 Brooker, Mrs. Charles F..... 5 00
 Brooks, Mrs. Shepherd..... 20 00
 Brown, Mrs. C. S..... 10 00
 Brown, D. J..... 2 00
 Brown, T. Hassall..... 10 00
 Burgess, E. Phillips..... 3 00
 Burnham, William..... 10 00
 Burpee, W. Atlee..... 5 00
 Burt, Miss Edith B..... 2 00
 Busk, Fred T..... 5 00
 Butler, Miss Virginia..... 10 00
 Button, Conyers..... 25 00
 Caesar, H. A..... 1 00
 Cameron, E. S..... 1 00
 Carse, Miss Harriet..... 2 00
 "L. C. L."..... 10 00
 Chapman, Miss M..... 10 00
 Chapman, Mrs. John W..... 2 00
 Clarke, Mrs. E. A. S..... 5 00
 Clarke, Mrs. L..... 2 00
 Clerk, A. G..... 1 00
 Cleveland, Mrs. Clement..... 1 00
 Cobb, Miss Annie W..... 2 00
 Colby, Howard A..... 5 00
 Collord, George W..... 5 00
 Colton, Miss Caroline West... 2 00
 Conner, Miss M. A..... 5 00
 Cristy, Mrs. H. W..... 1 00
 Crocker, Rev. W. T..... 2 00
 Crosby, Maunsell S..... 5 00
 Cummings, Mrs. H. K..... 1 00
 Curie, Charles..... 10 00
 Curtis, Miss Mildred..... 10 00
 Cutter, Dr. George W..... 2 00
 Cutter, Ralph Ladd..... 10 00
 Davis, Miss Lucy B..... 3 00
 Davis, Wm. T..... 10 00
 Day, Miss Carrie E..... 2 00
 Day, Stephen S..... 5 00
 Delafield, Mrs. John Ross... 2 00
 Dennie, Miss M. H..... 2 00
 Dodd, Miss Jean Margaret... 2 00
 Doering, O. C..... 10 00
 Doughty, Mrs. Alla..... 10 00
 Douglas, Mrs. James..... 15 00
 Duer, Mrs. Denning..... 10 00

Amount carried forward.....\$1,045 04

Amount brought forward....	\$1,045	04
Dwight, Mrs. M. E.....	2	00
Early, Charles H.....	2	00
Eastman, George.....	50	00
Edwards, Wm. S.....	5	00
Ellis, Wm. D.....	10	00
Ellsworth, Mrs. J. Lewis	1	00
Essick, Wm. S.....	2	50
Ettorre, Mrs. F. F.....	2	00
Evans, Wm. B.....	4	00
Fergusson, Alex C.....	2	00
Ferry, Miss Mary B.....	5	00
Folsom, Miss M. G.....	10	00
Foot, James D.....	2	00
Franklin, Mrs. M. L.....	10	00
French, Daniel C.....	2	00
Friedman, Mrs. Max.....	2	00
Friers, Miss Emilie.....	1	00
Frothingham, John W.....	35	00
Fuguet, Stephen.....	5	00
Gannett, Miss C. K.....	1	00
Gannett, Rev. W. C. and Friend.....	2	00
Gannette, Miss Mary T.....	1	00
Garst, Julius.....	2	00
Gibbs, H. E. A.....	30	00
Gladding, John R.....	15	00
Godeffroy, Mrs. E. H.....	10	00
Goodwin, George R.....	5	00
Greene, Miss Caroline S.....	1	00
Gwalther, Mrs. H. L.....	4	00
Hager, George W.....	2	00
Hallett, Wm. R.....	10	00
Hallowell, Miss Charlotte.....	2	00
Halsey, Mrs. Edmund D.....	8	00
Harkness, David W.....	5	00
"C. R. H.".....	5	00
"M. G. H.".....	5	00
Hathaway, Harry S.....	2	00
Hay, Mrs. John.....	25	00
Haynes, Miss Louise deF.....	10	00
Hazen, Miss Emily H.....	3	00
Hearst, Mrs. P. A.....	50	00
Henderson, Alexander.....	2	00
Herpers, Henry.....	2	00
Heydt, Herman A.....	1	00
Higbee, Harry G.....	1	00
Higginson, Mrs. J. J.....	10	00
Holt, Mrs. R. S.....	30	00
Hooker, Miss Sarah H.....	2	00
Hopkins, Miss Augusta D.....	3	00
Horr, Miss Elizabeth.....	5	00
Howe, Mrs. J. S.....	15	00
Howe, Dr. James S.....	5	00
Hoyt, Miss G. L.....	5	00
Hunter, Mrs. W. H.....	2	00
Hutchinson, Mrs. Charles L.....	10	00
Ireland, Miss Catharine I.....	10	00
Jackson, Miss Marion C.....	25	00
Jackson, Jr., P. N.....	6	00
Jenkins, Miss L.....	5	00
Jennings, Dr. Geo. H.....	3	00
Johnson, Mrs. Eldridge R.....	10	00

Amount carried forward.....\$1,547 54

Amount brought forward....	\$1,547	54
Jones, Boyd B.....	1	00
Jopson, Dr. and Mrs. John H.....	1	00
Jordon, A. H. B.....	20	00
Joslin, Miss Ada L.....	2	00
Jube, Albert B.....	3	00
Keim, Thomas D.....	1	00
Kennedy, Mrs. John S.....	5	00
Kerr, Mrs. T. B.....	1	00
King, Miss Ellen.....	25	00
Kuser, Mrs. A. R.....	10	00
Kuser, Anthony R.....	10	00
Lagowitz, Miss Marriet L.....	1	00
Laughlin, Mrs. H. M.....	2	00
Lawrence, Roswell B.....	4	00
Lewis, Mrs. August.....	10	00
Lewis, J. B.....	2	00
Lippitt, Mrs. C.....	5	00
Livingston, Miss A. P.....	15	00
Loring, Mrs. Charles G.....	3	00
Lovering, Mrs. Helen E.....	1	00
Luttgen, Walter.....	5	00
Mann, J. R.....	1	00
Marlor, Henry S.....	5	00
Marsh, J. A.....	5	00
Marsh, Spencer S.....	1	00
Mason, G. A.....	5	00
Mason, Mrs. Geo. G.....	10	00
Mason, Jr., H. L.....	5	00
Mellns, J. T.....	2	00
Merritt, Mrs. James H.....	1	00
Miller, Hon. Charles R.....	10	00
Minot, William.....	2	00
Montell, Mr. and Mrs. F. M.....	2	00
Morgan, Jr., Mrs. J. P.....	5	00
Morgenthau, Mrs. M. L.....	1	00
Moore, Henry D.....	100	00
Morgan, Miss C. L.....	5	00
Morrill, Miss A. W.....	5	00
Mosle, Mrs. A. Henry.....	5	00
Mott, Miss Marian.....	5	00
Murray, Jr., J. Irwin.....	1	00
McConnell, Mrs. Annie B.....	5	00
Nesmith, Miss Mary.....	5	00
Nice, Mrs. Margaret M.....	3	00
Oliver, Dr. Henry K.....	10	00
Osborne, Arthur A.....	5	00
Osterholt, E.....	5	00
Patton, Mrs. Margaret S.....	10	00
Peck, Dr. Elizabeth L.....	1	00
Pegram, Mrs. Edward S.....	5	00
Pepper, Mrs. William.....	5	00
Petty, E. R.....	2	00
Phelps, Francis Von R.....	10	00
Phinney, C. G.....	3	00
Porter, Miss Elizabeth B.....	1	00
Porter, Miss Juliet.....	5	00
Pott, Miss Emma.....	1	00
Procter, William.....	5	00
Proctor, Wm. Ross.....	25	00
Pusey, Mrs. Howard.....	2	00
Putnam, Mrs. A. S.....	3	00
Raht, Charles.....	5	00

Amount carried forward.....\$1,966 54

Amount brought forward....	\$1,966	54
Raymond, Charles H.....	15	00
Reed, Mrs. Wm. Howell.....	10	00
Rhoads, S. N.....	1	00
Richmond, Miss Edith H.....	1	00
Ricketson, Walton.....	2	00
Robins, Miss N. P. H.....	2	00
Robbins, Mr. and Mrs. R. E..	20	00
Robinson, William A.....	1	00
Ross, Dr. Lucretius H.....	2	00
Sabine, Dr. George K.....	2	00
Sampson, Miss Lucy S.....	1	00
Saul, Charles R.....	5	00
Saunders, Charles G.....	1	00
Savage, A. L.....	5	00
Sawtelle, Mrs. E. M.....	2	00
Sawyer, Mrs. C. R.....	2	00
Schwepe, Mrs. H. M.....	1	00
Scofield, Miss Helen.....	20	00
Scofield, Miss Marion.....	10	00
Sellers, Howard.....	10	00
Severance, Mrs. P. C.....	3	00
Shepard, Sidney C.....	10	00
Simpkins, Miss M. W.....	10	00
Sleght, Mrs. B. H. B.....	5	00
Small, Miss A. M.....	2	00
Smith, Mrs. Cornelius. B.....	6	00
Smith, Marshall E.....	1	00
Spachman, Miss Emily S.....	1	00
Spalter, Mrs. F. B.....	1	00
"Sphinx".....	5	00
Spong, Mrs. J. J. R.....	35	00
Sprague, Dr. Francis P.....	25	00
Spring, Miss Anna R.....	5	00
Squires, Mrs. Grace B.....	3	00
Stanton, Mrs. T. G.....	2	00
Stevens, F. E.....	2	00
Stevenson, Mrs. Robert H....	10	00
Stimson, Wm. B.....	2	00

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WILD DUCKS SWARMING IN GREAT SOUTH BAY, FEBRUARY, 1914.

Photograph by Dr. Frank Overton

LETTERS FROM CORRESPONDENTS

Naval Coöperation

"I am in receipt of your letter of inquiry. Aigrettes were undoubtedly, in some instances, brought in by officers and men of the navy from Central-American countries, where the birds are ruthlessly killed, and their plumes sold locally or exported; but this was before there was any law forbidding their importation. Since their importation is now forbidden,

"The Irish Society for the Protection of Birds, at their annual general meeting, held on the 23d of January, 1914, in Dublin, desire to place on record their appreciation of the good work done by the Audubon societies in the cause of bird-protection, by bringing about the passing of the new tariff law, which prohibits the importation into the United States of America of the feathers of wild birds. By their action the Audubon socie-



LONG ISLAND DUCKS, LOSING FEAR OF MAN IN QUEST OF FOOD, DURING
THE BLIZZARD OF FEBRUARY, 1914

Photographed by Dr. Frank Overton

and commanding officers of ships are required to submit lists of all articles, acquired by purchase or otherwise, which are to be landed, and the Treasury Department requires its officials to act upon said lists, it does not appear necessary to issue any further orders on the subject. I am in thorough accord with the spirit of the Audubon Societies, and I do not wish to condone in any manner violations of any customs regulation by persons in the naval service; and did not the whole matter appear to be now adequately covered by Navy and Treasury Department regulations, I should take steps to have further orders issued." JOSEPHUS DANIELS, Washington, D. C. *Secretary of the Navy.*

A Compliment from Ireland

"I have been directed by the Committee of this Society to forward to you the following resolution:

ties have struck a heavy blow against a most cruel and iniquitous trade.'"

GEORGE C. MAY.

Dublin, Ireland. *Honorable Secretary.*

Tamed by Hunger

"The cold weather which suddenly developed on February 9, 1914, froze the Great South Bay, Long Island, from shore to shore, leaving only small patches of open water at the mouths of the creeks. Owing to the unseasonably mild weather which had prevailed during December and January, large numbers of ducks were caught unawares, and were compelled to seek the open places near shore. On Sunday morning, February 15, a flock of about 5,000 Broadbills were swimming in the open water at the mouth of Patchogue Creek, and when frightened away they would immediately return. Every inlet on the south shore also con-

tained vast numbers of birds, and a great deal of illegal shooting took place, especially in the inlets away from habitations. The Ducks that were shot were too poor to eat, and there was absolutely no excuse for their killing. A good game-warden could have done an immense work in preserving the flocks. The Ducks are so tame that they swim unconcerned near the vessels, and beside a large lumber-yard and planing-mill in the creek near the railroad-crossing. The accompanying photographs (on pages 156 and 157) will give a little idea of their numbers, and also how tame they have become."

FRANK OVERTON, M.D.

Patchogue, L. I.

A Victory in Arkansas

"I feel that one of the greatest victories gained was when I succeeded in convincing the attorney general of Arkansas that the local law for Mississippi County, which permitted the exportation of Ducks for market, was unconstitutional, and secured, as you know, his opinion to that effect. This will put a stop to the shipping of millions of Ducks for market-purposes, and absolutely put the market-hunter out of business in Arkansas. I am very proud of the success I have had in knocking out the local game-laws; and now, since I have succeeded in stopping the shipping of game, I feel that I am very well paid for all my work for the past eight years."

E. V. VISART.

Little Rock, Ark.

Law-breaking Tourists

"On January 19, 1914, the yacht *Flaneur*, of New York, with Mr. John Noething, of New York City, passed by here and ran aground within a few hundred yards of that big warning notice on the Mosquito Inlet Bird Reservation. In a few minutes I saw him get into a small boat and drift down to a large bunch of Pelicans that were resting on a sand-bar. I saw the birds fly but heard no report

from a gun, and concluded that they were photographing them, as many persons do; but they had a high-power small-caliber rifle. Some men fishing near saw them shoot and pick the birds up and carry them across the river and hide them in the brush, and so informed me, and told me where to find them. I at once went down, found one bird, and took it over and confronted Noething with it. He promptly denied any knowledge until I told him it was useless, and so placed him under arrest, and am taking him to Daytona, where I can put a marshal aboard the boat to take care of him until I can get action. It was a purely wanton and illegal act on the part of Noething."

B. J. PACETTI,

Inspector of Government Reservations.

Ponce Park, Florida.

[At a cost of \$75; the National Association assisted in prosecuting this man Noething, who later, in the Federal Court at Jacksonville, Fla., was fined \$110 and costs.—T. G. P.]

A Bird Oasis

"Last summer, during the extreme heat and drought (it was unusually severe, for we had no rain for more than two months, and for several days the thermometer registered 118 degrees in the shade), I used to watch the birds gathering daily in our yard for shelter from the terrible heat. As the city water-supply was very low, residents were not allowed to use water on their lawns at any time for a period of four or five weeks; consequently our town presented a parched and desert-like appearance, except for a few lawns, like ours, which had a constant supply of water from individual water-plants. This yard, with its dense shade and green grass, was a veritable oasis, to which the birds flocked by the hundreds, to bathe in the spray from the lawn-sprinkler, and to drink from the vessels I had provided for their use. Realizing their needs, I placed several basins and a large tin pail, which I kept filled to the brim, where they might have access to

them, and was repaid for my trouble by the very excellent opportunity it gave me to study their peculiarities. There were many human attributes manifested by that feathered tribe, in those few days, over their privileges and fancied rights. The English Sparrows seemed to hold a monopoly over the water-pail, and it was a pleasing and not uncommon sight to find an unbroken circle of trim little tails fringing its rim. For two days, a solitary Nighthawk selfishly appropriated one of the basins for his exclusive use, and the Robins and Blackbirds were almost constantly disporting themselves in the spray circling from the sprinkler. The Woodpecker always kept on the outskirts. I never once saw him join the rest of the company. The Brown Thrashers and Mockingbirds, too, were rather timid and never asserted themselves aggressively. Unlike the Woodpecker, however, they mixed quite freely with the rest of my

guests. I was struck, too, by the number of strangers which came to this party—birds I had never seen before; and so I kept a lookout for the little black-and-white singer previously mentioned to you, but he never appeared. One day I made a note of the different varieties perched within a radius of seventy-five feet, and, as nearly as I can remember, there were fifteen distinct varieties. Among them were Robins, Thrushes, Orioles, Goldfinches, Sparrows, Catbirds, Kingbirds, Mockingbirds, and Blackbirds, also a Woodpecker and the Nighthawk."

ELIZABETH SCHNALLER.

Hayo, Kansas.

Lively Juniors

"When I read to the class your letter, received previous to organization, I was somewhat surprised at the hearty response and enthusiasm manifested. A meeting



THE BRUSH HILL (MASS.) BIRD-CLUB EXHIBIT
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was called, officers for a Junior Audubon Society were elected, and the requirements of the society more definitely explained. To strengthen the enthusiasm, I gave the president full control of the meeting. He proceeded to business by appointing two members to prepare papers on some bird of their choice, to be read at the next meeting. An additional fee of 25 cents was assessed upon each member, for the purpose of purchasing books about birds. Some of the boys have agreed to build a bird-house to be placed on the school-grounds."

ANNA M. HEANEY.

Wallkill, N. Y.

NOTES OF RECENT LEGISLATION

Shall Cats Be Licensed?

The bird-lovers and agricultural economists in both Massachusetts and New Jersey have renewed this year their efforts to get state laws licensing cats, in order to reduce the number of strays, which are virtually wild animals of prey, and cause the death of innumerable birds whose services would be of benefit to the community. In Massachusetts, the proposal, which was defeated in committee on March 13, was that a single male cat should be permitted unlicensed to each family; but that all others should be safe from capture and death only on payment of a license (\$1 for a male, and \$2 for a female), indicated by wearing a collar and tag.

In New Jersey, a bill, originating with the game commission, has passed the Assembly, and is now pending in the Senate.

In both these cases, members of the State Audubon Societies, and of several organizations interested in game-protection, as well as many private supporters, have appeared to urge the passage of the measures; and this Association has added its influence. The opposition comes mainly from conservative farmers, and from women defending their pets; but the arguments of both were sentimental rather than substantial.

No Escape by Parcel Post

That the facilities of the parcel post cannot be used by malefactors as a means of breaking the law against the importation of prohibited millinery feathers has been established by rulings of the post-office authorities. Among the first results of this wise decree were the seizure, in the Chicago post-office, of two packages of foreign feathers, mailed, one from China, and one from Japan, to ladies in Massachusetts, and in Ohio.

Progress in Great Britain

A cable message from London informs us that the bill prohibiting the importation into Great Britain of the plumage of wild birds, or "bits of birds," passed its second reading in the House of Commons on March 9, and was forwarded by the overwhelming majority of 297 to 15.

A Check in Virginia

The bill to establish a state warden force, to be supported by the license-fees of resident hunters, which has been so strongly urged in Virginia by the State Audubon Society, encouraged by this Association and other kindred influences, failed on March 13, by four votes, to pass the Assembly, after having passed the Senate, because, as President Hart says, some members could not obtain objectionable amendments.

Relief for Birds-of-paradise

The German government, through Dr. Wilhelm Solf, Minister for the colonies, has forbidden any hunting of Birds-of-paradise in German New Guinea during the next eighteen months, the order issuing on March 11. In announcing this decision in the Imperial Parliament, Dr. Solf said he had originally intended to make the prohibition permanent, but had changed his view after receiving a report from an expedition in the interior of New Guinea, which said there were immense numbers of birds there, and that no danger existed of their extinction.

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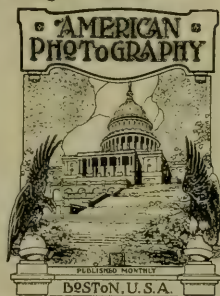
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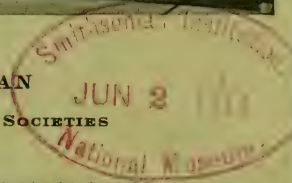
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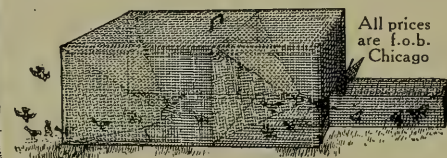
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Vol. XVI

MAY—JUNE, 1914

No. 3

Impressions of the Voices of Tropical Birds

By LOUIS AGASSIZ FUERTES

Illustrated by the author

FOURTH PAPER—ANT-THRUSHES AND THEIR ALLIES, AND WOODHEWERS

TO NORTHERN perceptions and training, the ghostly, long-legged forest ground-runners, generally known as Ant-thrushes, make an immediate and lasting appeal. The many species of *Grallaria*, *Formicarius* and *Chamaeza*, finding their most congenial surroundings among the tree-ferns and moss-filled undergrowth of the wooded slopes, at once impress the student with their presence, but leave him, after however long an acquaintance, with little more knowledge of their lives and doings than he had on first hearing their invitation to the game of hide-and-seek they so skilfully and persistently play.

They are all strictly terrestrial and, on the rare occasions when they fly, they keep so close to the ground that their dangling feet almost touch. Indeed, I suspect that they fly only upon some special stimulus, ordinarily going about on foot.

The commonest and most generally distributed species in Colombia is *Grallaria ruficapilla*. It is about as big as a Robin, but is almost round, stubby-tailed, big-eyed, and comically long-legged. But while it was really a common bird, and its whistled *compra pan* was almost constantly in our ears in all three ranges of the Andes, not over six or seven were taken. Certainly nine out of every ten efforts to see the author ended blindly, even though they respond immediately to a whistled imitation of their notes. But so silent is their approach, and so densely are their ground haunts veiled by ferns, large fallen leaves, earth-plants and other visual obstructions, that they may call almost from between your feet with impunity, while with pounding heart and eager eyes you fail to penetrate the veil of intervening leafage. I have usually found that, while all these ground-running birds answer eagerly to a call, they are very easily satisfied on seeing its author, and usually the response, now almost under foot, suddenly fails, and the little feathered mouse that gave it swiftly and silently trots away after one quick look at the

huge impostor. I think we all had certainly scores of these little ground-ghosts within fifteen to twenty feet, and not one-tenth of them gave us so much as a fleeting glance at them.

Grallaria's note can always be closely imitated by a whistle. The call of the common *Compra pan*, whose name is the Spanish literation of his call, has a very 'quaily' quality when heard near at hand. Three drawled notes—A, F, G, the first and second three tones apart, and the last between. We came to recognize this as an exact marker of the lower line of the second life-zone, beginning at about 4,500 feet. This species goes up almost to the upper limit of trees, and adheres closely to the cloud forest. I never heard



COMPRA PAN (*Grallaria ruficapilla*)



THE NOON-WHISTLE (*Chamaeza turdina*)

any variation in the song except, when the bird is near the limit of its curiosity, the last note sometimes drops off in a throaty slur, instead of rising a tone: A, F, E.

On the west slope of the Eastern Andes we found another species, *G. hypoleuca*, whose song, though readily recognizable as a *Grallaria* was radically different in form. One longish note on B; a rest; then about five ascending notes a scant semitone apart, and four to the second. This bore a striking resemblance to the first half of *Chamaeza brevicauda*'s song heard on the eastern slope of the Eastern Andes at Buena Vista, and is almost identical with that of *Grallaria rufula* from the highest timbered ridges of this chain, except that here the pause is omitted and the song is higher, beginning on E.

Little *Grallaria modesta* from the eastern foot of the Andes at Villavicencio,

has a most characteristic little song, all on E. It has seven sharply *staccato* notes, forming a perfect *crescendo* to the fourth, then diminishing to *piano* again at the end. The middle note is strongly accented. This little hermit lives in the sweltering weed-thickets along the sun-baked beds of the low-land streams. I shall never forget an hour in a burr-thicket with nettle accompaniment, at a temperature of perhaps 115°, trying to find the elusive author of that queer little song. At least five times I had him within close range, but never could I see more than a ghost of a movement, or the sudden wiggle of a fern rubbed against in his approach. Nearly discouraged, with hair, eyebrows and clothes matted thick with little burrs, almost exhausted with the heat, I at last hit upon a very effective scheme. Deliberately clearing out a space of ten or fifteen feet, and a tapering lane through which I could watch the opening, by gently approaching the sound I drove it to a point well beyond my clearing, and retreated to my station. Waiting here a few minutes in silence, I repeated the call, in full loudness, until I got a response. Then, as the bird approached, I did the call more softly, to appear farther away and allay his wariness. My unfair subterfuge worked, and little long-legged piper entered my trap unsuspecting, and I was able to identify it. We had not encountered this species before, and never saw it again after leaving the torrid lowlands about Villavicencio. I was never able to identify the song of the big slaty-blue breasted *G. ruficeps*, in the uppermost forest zone above Bogotá. These were all the species of the genus that I, personally, encountered.

On the wooded slopes above Villavicencio we found another bird conspicuous in song, but spirit-like in actions. We at first thought it was a *Grallaria*, but it proved to be a closely allied bird, *Chamaea brevicauda*, very similar, but with shorter legs and more delicate bill. It had a curious song of about seven gradually ascending 'toots,' followed by four or five queer little falling yelps: *oot, oot, oot, oot, oot, oot oot—elp, elp', elp', ulp', ulp'*. It was common, and, because the forest was much opener and almost like our woods, it was much easier to find and see. But, even so, many more were heard than we were ever able to discern, and we never got over a feeling of victory when we succeeded in seeing the singer. The color gradation was so perfectly adjusted to the lighting in the woods that only a motion was visible, and that scarcely.

In the dark, fog-steeped forest along the culm of the Central Andes, a closely related species, darker in color, gave me one of the great song-sensations of my life. I heard a sharp, loud, *wip-wip-wip* and ascribed it to one of the Wood-quail. I hunted it unsuccessfully, until I was discouraged and exhausted. Also, I became dully aware of a distant and long protracted whistle, which I vaguely attributed to a steam-whistle in some neighboring village. So does our common sense become dulled when we are confronted by unfamiliar surroundings! On my tired way back to camp, I realized that there

were neither mills, steam nor villages in these mountains, which are unbroken virgin forest for a hundred miles or more either way. Perhaps I had heard a cicada. I could scarcely credit a bird with such a prolonged sound as this.

The next day I went back to solve the thing. When, after two hours of steep ascent, I had reached the 8,000-foot level, I heard again my mysterious



ANT-THRUSH (*Formicarius rufipectus carrikeri*)

whistle. Listening carefully, and imitating it as well as I could, I was able to discern that the sound became definitely more loud and distinct. No insect, this. Soon I could analyze it quite closely, and found it to be a very gradually rising *crescendo*, beginning about on C, and a full though slightly throbbing or tremolo whistle. I was astonished at its duration, for I could detect no time at which a breath could be taken. Timing three successive songs, I found them to endure forty-seven, fifty-seven, and fifty-three seconds! This was

more than twice the length of any continuous song I have ever heard, the Winter Wren being second with twenty-eight seconds. But in this broken song there are surely many opportunities to catch the thimbleful of breath a Wren can hold, while the *Chamaeza* song was one long, unbroken, and constantly increasing sound.

Eventually, my singer came so near that I was afraid of scaring it away by the imperfection of my imitation, which required a full breath out, an in-breath to full lung-capacity, and then the last bit of breath I could expel to accomplish even a forty-second song! So I sat silent, tense and eager, hoping almost against hope that the mystery-bird would reveal himself. Suddenly, almost at my heels, a song began. Very soft and throaty at first, gradually rising and filling, the steady throbbing *crescendo* proceeded until I was so thrilled that I was afraid I couldn't stand it any longer. I dared not move, as I was in plain sight, on the edge of a scar in the earth from a recently uprooted tree. Finally, though, the tension was relaxed; the song ceased. Where would it be next time? In front of me? Or would the singer see me and depart for good, still a mystery? Even as I was thinking these things, a ghostly-silent little shadow sped dangling past me and came to a halt about thirty feet away, half lost in the dark fog, on the far side of the raw little clearing. In awful anxiety lest he become swallowed up in the mist and lost to me, and with a great effort not to lose the dim impression of the faintly-seen bird, I moved slightly for a better view. My long watch was futile, for my spirit bird disappeared. I sat awhile and mourned, with a great deal of invective in my heart. But soon realizing that this was futile, I decided to practise the song I had learned. Imagine my surprise, after the first attempt, to hear, close by, the loud *wip-wip* of yesterday, and to see it followed almost immediately by another ghost-bird, which had the grace to alight or stop running (I couldn't be positive which) within range and in sight. This proved to be *C. turdina*. Although we often heard the curious protracted song later, when we went to the top of the range, we never again caught sight of this little-known bird, and this specimen remains unique in the whole South American collection.

The several species of true Ant-thrush, *Formicarius*, all have characteristic notes, combined with the same skulking, rail-like habits of the foregoing. The recently described Colombian form of *F. rufipectus* has two sharp whistles, the last a semitone above the first. This, in our experience, was never varied. *F. analis connectens*, from the lower forest zone of the eastern foot above Villavicencio, had a song the exact reverse of that of *Grallaria hypoleuca*; a loud note on G, followed, after a rest, by a close descending scale of three or four semitones. *Formicarius*, like *Grallaria*, has a sort of clucking quality when heard near at hand.

Few brush-birds have more distinctive notes than the Ant-shrikes or *Thamnophilus* and their relatives. The commonest one we encountered,

T. multistriatus, has the characteristic dry, woody, descending scale common to many species. It strongly suggests in quality the spring 'rucking' of a Nuthatch. It might be written *ruk, ruk, ruk, uk, uk, k, k, k* beginning lazily, and gathering speed as it descends. All these birds put much effort



ANT-SHRIKE (*Thamnophilus multistriatus*)

into their calls, and sing with head up and tail down. The latter moves noticeably at each note and, as with the Trogons, we came to look for the vibrating tail when hunting them.

The many species have different notes, but most are readily recognizable

as *Thamnophilus* when any one of them becomes thoroughly familiar. Until one has had real experience with tropical birds, it is hard to work up much of an interest in the great mass of dull-colored brown and gray birds that

form such a large proportion of the whole. In a case of South American birds, the eye alights on the brilliant Tanagers, Callistes, Trogons, Cotingas, and Hummingbirds, and ignores all the myriad Flycatchers, Ant-thrushes, Furnarian birds, and other dullish and negative-colored things. But, in the field, the sense of sound enters and combines with the very interesting habits of the more obscure species. I can hardly subscribe to the popular idea that tropical birds are as a rule bright-colored and devoid of song after listening with an appreciative ear to the morning chorus in a Mexican or South American forest.

One of the most extensive and typical families is that of the Dendrocolaptidæ, or Woodhewers. They are, in actions, overgrown Brown Creepers. There are many



WOODHEWER (*Picolaptes lacrymiger*)

genera and almost endless species. As a family it is nearly as extensive and varied as the family of Finches, though all have a single general type of coloring that is hardly departed from. The great, Flicker-

sized *Dendrocolaptes*, the tiny *Xenops*, and all between, are mainly wood-brown varying from rusty to olive, and streaked or not, but never boldly marked. They are also fairly unanimous in their songs, though of course there is considerable variation. Most that I have heard have a harsh, raspy note of alarm or displeasure, and many species sing a loud, ringing song that strongly recalls our Cañon Wren; *tee, twee, tui, tui, tooi, tooi*, a descending series of whistles, which, pure and piercing in the lesser species, becomes coarse and 'Woodpeckery' in the larger. There are really no fine singers in this group, although several make pleasant sounds in the spicy-scented slashings, and all are interesting. They are rather silent birds, as a rule, and, as the family contains many rare and curious types, which are elusive and tricky, they are a never-ending source of interest and curiosity.

The Woodpeckers may be dismissed in a sentence. Their calls and notes are all perfectly typical of the group as we know it in this country, and I recall no species that deviate noticeably from the well-known types of cries and calls by which we recognize our own species.





THE UNCLE REMUS BIRD SANCTUARY. HOME OF THE LATE JOEL
CHANDLER HARRIS

The mail-box at the left was used by the Wrens for a nest, and gave the place the name of
"The Wrens' Nest"

A Bird Sanctuary for The Sign of the Wren's Nest

By MRS. J. O. PARMELE, Atlanta, Ga.

THE Sign of The Wren's Nest" is a phrase always used when people speak of the home of the late Joel Chandler Harris, situated on one of the most beautiful streets in Atlanta, Georgia.

The local chapter of the Burroughs' Nature Club and the Uncle Remus Association have made The Wren's Nest a bird sanctuary. It is proposed by the committee to make at once an effort to get rid of the English Sparrows by the use of a Dodson sparrow-trap, and they have put in place two bird-baths and one or more feeding-stations. Bird-houses will later be placed in the trees, and plants and trees useful to attract birds and produce fruit will be set out, particularly those that bear berries in the late fall that will serve as food for the birds during the winter.

The Uncle Remus Bird Sanctuary is the first bird sanctuary in Georgia, though there are many in other states. Years ago a little family of Wrens, worried and persecuted by the bulldozing Sparrows of the neighborhood,

sought refuge at The Wren's Nest. First, the fugitives built a nest at the gate, in the letter-box, which thereafter was scrupulously respected by the postman, and even by the children of the vicinity. Thus encouraged, they made themselves at home in many quiet nooks and corners in the vines, and, receiving watchful care and protection from the inmates in the cottage, they organized a little republic of their own; and in their picturesque domain they have ever seemed to regard themselves as the rightful owners and rulers of the entire tract. Birds, next to children and flowers, were the special objects of 'Uncle Remus's' attention.

The Park Board of Atlanta is caring for the trees at The Wren's Nest and the grounds are kept in perfect order. The Memorial Association is planning a series of scenes for moving pictures that will show The Wren's Nest and places of interest about the place. Everybody loves the home where "Brer Rabbit" lived, and the tourist always wishes to go to Snap-Bean Farm, that he may enjoy the scenes where Uncle Remus talked to the Little Boy, and the old "Bar" and "Sis Cow," and all the other fanciful people and animals that lived in the imagination of the author.

There is a guest-book at the Sign of the Wren's Nest that shows enrolled the names of distinguished men and women of world-wide interest. Fifty-three states and governments are represented, but the tourist does not linger over the guest-book to see the distinguished names it bears. He wishes to see the birds, the rabbits, the trees, the flowers, and the vines, where "Brer Possum" was caught napping.

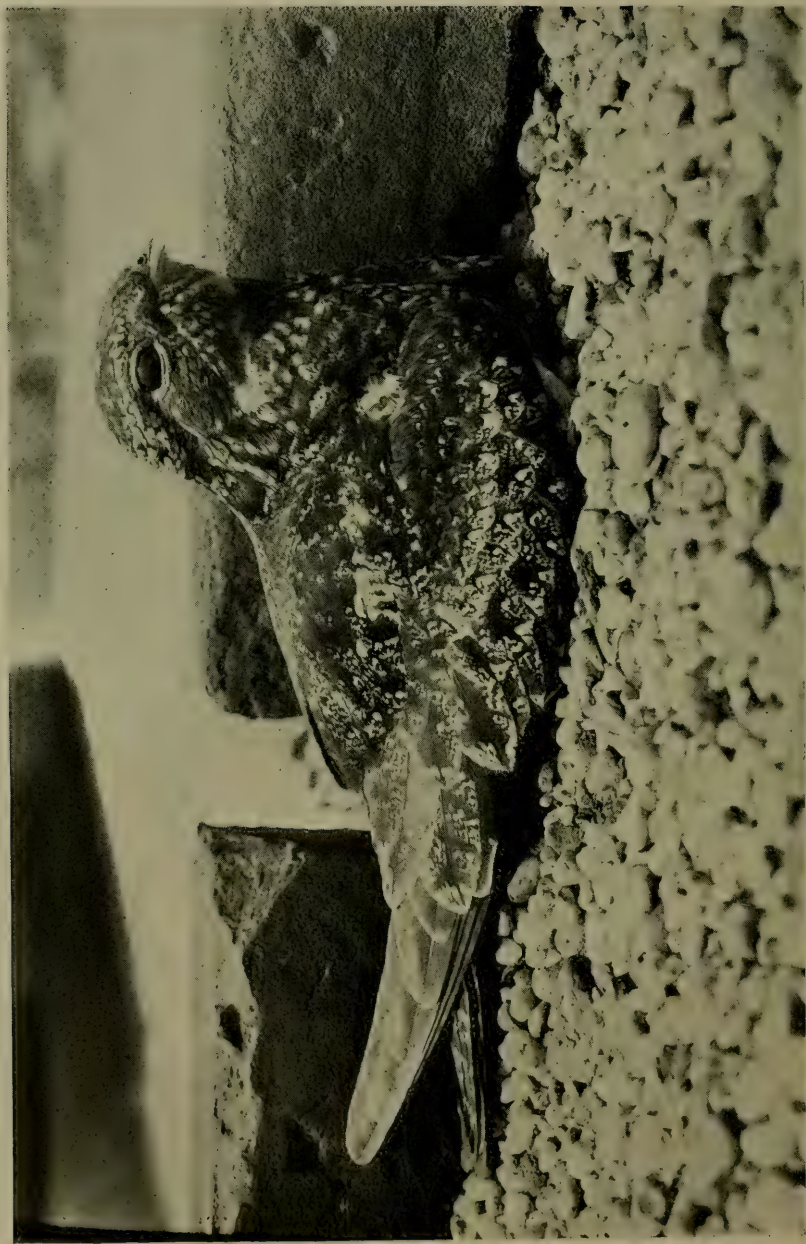
It is the earnest desire of all Atlantians that some day there may be a child's hospital at The Wren's Nest, that will be the greatest memorial that can be erected to the memory of Joel Chandler Harris.

THE BALTIMORE ORIOLE

Is it a firebrand, tossed in the air,
Which the soft breeze fans to a flame?
Glowing and brilliant beyond compare,
As it darts and flashes, now here, now, there,
Pray, can you give it a name?

Or is it a petal from some gorgeous flower,
Wind-blown from the tropics this way?
Or a meteor shooting through orchard and bower,
Till the blossoms come falling, a glorious shower,
Like the ghost of a snowstorm in May?

—NELLIE J. WHARPLES.



NIGHTHAWK NESTING ON ROOF
Photographed by Lewis F. Hall

The Nighthawk in Connecticut

I

By LEWIS F. HALL, Bridgeport, Conn.

I HAVE read of Nighthawks laying their eggs on the gravel roofs of buildings in the heart of cities, but never before this summer has it been my good fortune to see them nesting, or to obtain a good photograph of the female on the eggs.

On June 14, 1913, I learned that a Nighthawk had laid two eggs on the tar-and-gravel roof of the Southern New England Telephone Co.'s. building at 184 Fairfield Ave., Bridgeport, Conn. This is a three-story building in the heart of the business section. Being anxious to photograph the bird, I at once paid a visit to the Telephone Office and obtained permission to go up on the roof. This I did by means of the fire-escape, and there, beside two bricks which were lying on the roof, sat the female Nighthawk, her color matching perfectly that of the tar and gravel.

After flushing the bird and finding only one egg, I learned that the other had been broken by the bird in removing it with her wing from under a peach-basket which had been placed on edge over the eggs by employees of the Telephone Co., in an endeavor to capture the bird.

I then set up my camera eighteen inches from the egg and, after photographing it, I concealed myself behind a skylight and waited for the return of the bird. She soon flew from a neighboring building, alighted on the roof about twenty feet from the egg and, after spending about fifteen minutes carefully scrutinizing the camera, which was covered with black cloth, returned to the nest.

I then crept out on my hands and knees and succeeded in pressing the bulb, which was only about one foot in back of the camera. I repeated this operation several times, taking, in all, two pictures of the egg and four of the bird. The last three photographs of the bird were all taken within fifteen minutes' time, the bird, which had then become used to the camera, returning to the nest each time almost immediately after I had hidden behind the skylight. During the time the last three photos were taken, the bird did not once leave the roof, but merely flew upon the coping about twenty feet from the egg, where I changed the plates in preparation for the next picture.

II

By WILBUR I. SMITH, South Norwalk, Conn.

ONE of my earliest memories is of my grandfather taking me out into one of his meadows and showing me a Nighthawk sitting on her eggs, laid on a bare rock.

The bird allowed us to approach quite near, when grandfather told me to "pick her up," but the bird went fluttering off with all the manifestations of

distress and broken wings, I eagerly following, until safe away from her nest the Nighthawk gracefully rose in air and sailed away, to come back and alight on the bar way. I was puzzled at the bird's distress and quick recovery, and would have followed it further, but grandfather led me away, for he was fond of the birds, and had wished to show me what curious birds they were.

A pair of Nighthawks had nested on that rock for many years, and was fairly common in that section, but I have not known of a pair nesting thereabouts in many years. In the fall we sometimes see large flocks of Nighthawks migrating in a westerly direction, and their numbers give us faith to believe that somewhere they are holding their own.

At five-thirty in the afternoon of September 6, 1913, while approaching my home station on a train, I noticed a flight of Nighthawks over the upper harbor, and at home, two miles further, their numbers seemed undiminished, and more were coming out of the east.

The birds were feeding, most of them flying low, and cutting all kinds of figures in the air, as they rose and dropped, zig-zagged and crossed each other in their search for food.

My companion of the day had left me, to go to his cottage at Fairfield Beach, eleven miles east of my home, and he found that large numbers of the Nighthawks were feeding over the broad meadows, and that certain of the beach population were shooting them.

He secured three of the dead birds, while more drifted off with the tide, and evidence that resulted in convicting two men of the shooting, but not without some difficulty, as one of them was assistant city clerk in one of our large cities.

Making a note of this Nighthawk incursion, I find that on the evening of September 6, 1905, there was a similar migration of Nighthawks when their numbers seemed inexhaustible.

This time, the birds were flying high in open formation, in slow and heavy flight, as though tired, and came out of the east and disappeared into the west.

It is an interesting coincidence that both of these flights should have occurred on the same day of the month and the same time of the day, and that both were following the shore of Long Island Sound.





A SUMMER VISITOR (CHIPPING SPARROW)
Photographed by Joseph W. Lippincott, Bethayres, Pa.

The Migration of North American Sparrows

TWENTY-EIGHTH PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With drawings by LOUIS AGASSIZ FUENTES

(See Frontispiece)

BACHMAN'S SPARROW

Though technically considered a subspecies, Bachman's Sparrow (*Peucaea aestivalis bachmani*) has a wider distribution and is better known than the type species, the Pine-woods Sparrow (*Peucaea aestivalis aestivalis*). The latter is only slightly migratory, breeding in a restricted area from southern Georgia to central Florida, and wintering from the southern part of the breeding-grounds to southern Florida. It is probable that the short migration journey is performed in late February and early March, and by the end of this latter month the species is settled in its summer home.

Bachman's Sparrow is an example of a bird that is apparently extending its range. Within recent years it has become common locally in southern Virginia, and has increased around Washington, D. C., until it is now known in four localities. It has invaded Ohio, even to the northern part of the state, and also western Pennsylvania. The more northern breeding individuals are strictly migratory, while from eastern Texas to northwestern Florida the birds are present throughout the year.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Greensboro, Ala.....			February 21, 1890
St. Mary's, Ga.....			February 17, 1902
Savannah, Ga.....	5	March 14	March 5, 1909
Atlanta, Ga. (near).....	3	March 13	March 12, 1906
Charleston, S. C.....	8	March 14	February 25, 1885
Raleigh, N. C.....	7	April 16	March 19, 1887
Weaverville, N. C.....	6	April 13	March 28, 1890
Lynchburg, Va.....			April 7, 1901
Washington, D. C.....	2	April 27	April 26, 1914
Rockwood, Tenn. (near).....	3	April 7	April 3, 1884
Eubank, Ky.....	7	April 6	March 20, 1889
Ink, Mo.....			March 19, 1905
Mt. Carmel, Ill.....			April 3, 1910
Bicknell, Ind.....	4	March 25	March 19, 1908
Bloomington, Ind.....	4	April 11	April 6, 1884
Cincinnati, O.....	2	April 24	April 23, 1903
Cedar Point, O.....			May 14, 1909
Beaver, Pa.....			April 29, 1910

The birds that winter as far south as central Florida leave, on the average, March 13; latest March 26, 1887. Migrants appeared at Atlanta, Ga., September 11, 1902; Savannah, Ga., September 16, 1906; Raleigh, N. C., Sep-

tember 20, 1901; and in northern Florida, on the average, October 7, the earliest, September 27.

The last one noted at Eubank, Ky., was on September 26, 1889; Monteer, Mo., September 27, 1909; near Mt. Carmel, Ill., October 28, 1882; New Harmony, Ind., September 24, 1902; Weaverville, N. C., November 1, 1890.

BOTTERI'S SPARROW

This is a Mexican species, scarcely, if at all, migratory. It has a wide range in Mexico, but barely reaches the United States in the Rio Grande Valley of extreme southern Texas. It has also been recorded from a few localities in southern Arizona, north to the Santa Catalina Mountains.

CASSIN'S SPARROW

Wintering in Mexico, Cassin's Sparrow migrates early in the season into the contiguous parts of the United States. It was noted at Brownsville, Texas, as early as February 1, 1910; while the average date of arrival at San Antonio is March 23, the earliest, February 18, 1897. Migrants enter southern Arizona soon after the middle of March, and the species breeds north to southeastern Nevada, southern Colorado, and southwestern Kansas. It was still common at Carlsbad, N. M., September 12, 1901, and remained at Laredo, Texas, until November 12, 1885.

RUFOUS-WINGED SPARROW

Southeastern Arizona, north to the Santa Catalina Mountains, is the only part of the United States where the Rufous-winged Sparrow occurs. The main part of the range is in northern Mexico; but the few individuals that occur in Arizona remain there the entire year, and the nesting season is so extended that fresh eggs have been noted from the middle of May to the second week in September.

RUFOUS-CROWNED SPARROW

This Sparrow has been separated into four forms, or subspecies. The earliest-known form, now called the Rufous-crowned Sparrow (*Aimophila ruficeps ruficeps*), occurs in California west of the Sierra Nevada, and north to Marin and Placer Counties; it ranges south to the San Pedro Martir Mountains of Lower California. While not strictly a non-migratory species, yet some individuals remain through the winter at the extreme northern limit of the summer home, and prevent the obtaining of any exact data on the movements of the migrant birds. Apparently most of the short migratory flight occurs in March.

Scott's Sparrow (*Aimophila r. scotti*) ranges from northern Mexico north to southern Arizona, northern New Mexico, and southwestern Texas. It is not

probable that the individuals breeding in northern New Mexico remain at their summer home through the winter, but the species is found at this season in the southern part of that state.

The Rock Sparrow (*Aimophila r. eremæca*) breeds principally in Texas east of the Pecos River, while a few birds range north to the Wichita Mountains, Oklahoma. Though the species is partially migratory, and is found in winter south to Puebla, several hundred miles south of the breeding-range, yet some birds also remain at this season in northern Texas nearly to the northern limit of the summer home.

The fourth form, the Laguna Sparrow (*A. r. sororia*), is a non-migratory sub-species inhabiting the mountains of southern Lower California.

Notes on the Plumage of North American Sparrows

TWENTY-SEVENTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Both range and habit tend to prevent the Sparrows figured in this issue of BIRD-LORE from being widely known. Confined for the greater part to our southern border states, they do not, as a rule, enter the region where bird students most abound, while their retiring habits and generally elusive ways make them far from conspicuous, even in localities where they are common. I have no personal knowledge of the more western species, but, if any of them sing as sweetly as does our Pine-woods Sparrow (and its northern race, Bachman's Sparrow), it is indeed a pity that their voices should so rarely fall on appreciative ears.

As the frontispiece shows, even those birds of this group which are ranked as species bear a close general resemblance to one another. The 'Check-List' of the American Ornithologists' Union places them in two genera, *Peucaea* and *Aimophila*, but Mr. Ridgway, in his great work on the 'Birds of North and Middle America,' includes them all in *Aimophila*, proof that the exact degree of their relationships is largely a matter of opinion.

The molts of these birds have not, so far as I am aware, been minutely studied, nor have we at this time sufficient material to go thoroughly into this subject. It may be said, however, that in all the species the sexes are alike, and there are no marked seasonal changes in color.

The nestling always has the underparts more or less distinctly streaked. These streaks are lost at the post-juvenile molt, and in our eastern species (and doubtless also others) the young birds pass into a plumage (first winter) which cannot be distinguished from that of the adult of the same season. The differences between winter and summer plumage are largely due to wear.

To this brief outline may be added a list of the species and races, with the

characters by which they may be distinguished. Their ranges are given by Professor Cooke in the preceding article.

Pine-woods Sparrow (*Peucaea aestivalis aestivalis*, Fig. 2).—All three species of *Peucaea* agree in having the bend of the wing yellow, a mark which is wanting in our species of *Aimophila*. In addition to this feature, the heavily washed chest, in connection with the absence of maxillary streaks, distinguishes this species. Its northern form, Bachman's Sparrow (*Peucaea æ. bachmani*), has much less black on the upperparts, which are sometimes only bay and gray.

Cassin's Sparrow (*Peucaea cassini*, Fig. 1).—The spotted or barred appearance of the back is the diagnostic character of Cassin's Sparrow. Instead of being centrally streaked, the feathers of the back have a narrow black bar near the end. The general color of the plumage is decidedly paler than that of the other birds having the bend of the wing yellow (*Peucaea*).

Botteri's Sparrow (*Peucaea botteri*, Fig. 3).—This species most nearly resembles the Pine-woods Sparrow, but is larger, pale above, and the breast is less heavily washed.

Rufous-winged Sparrow (*Aimophila carpalis*, Fig. 4).—The chestnut-rufous lesser wing-coverts, and the similarly colored, gray striped crown will serve to identify this species, which bears a singularly close resemblance to a Western Chipping Sparrow in winter plumage.

Rufous-crowned Sparrow (*Aimophila ruficeps ruficeps*, Fig. 5).—This species may be known by its rufous cap, well-marked maxillary streaks, and absence of black markings (less than Fig. 5 shows) in the back, together with the lack of yellow on the bend of the wing. This is the California form. In southern Lower California it is represented by the Laguna Sparrow (*A. r. sororia*), a nearly related race, somewhat brighter above and with a slightly larger bill. In Arizona there is a third form, Scott's Sparrow (*A. r. scotti*), which has the underparts decidedly paler, the back with grayer margins; and in Texas a fourth form, the Rock Sparrow (*A. r. eremæca*) has the crown darker, more chestnut than in Scott's Sparrow, and the back still grayer. These races, however, can be satisfactorily identified only on comparison of specimens, but since, during the nesting season, one is unlikely to find any two of them at the same place, the locality at which a bird is found will, at this season, go a long way toward determining to which particular race it belongs.



A Coöperative Study of Bird Migration

IN RESPONSE to the request published in the January-February BIRD-LORE, fifty-seven reports of the arrival, etc., of the Red-winged Blackbird, Robin and Phoebe have been received. We wish to thank our readers for these reports, and especially—in almost every case—for copying so carefully the form we printed.

The arrival of these early migrants is much more irregular than that of those species due in May. It is more dependent on the weather conditions, and this year all sections of the country report an exceptionally late migration, owing to the frequent and heavy snow-storms and unusually cold weather in the early spring. The dates given in the following columns, therefore, are far from normal. The January and February dates must refer, in most cases, to wintering birds, not to newcomers.

The Robin was at most stations the earliest species to appear and to become common. After passing New York City, those that continued along the coast went much faster than those that followed up the big river valleys. Robins reached northern New Hampshire and northern Nova Scotia at about the same time, though the former is three hundred, and the latter seven hundred miles from New York. That makes the advance of the species along the coast about forty-seven, and up the Connecticut Valley only twenty miles a day. The evidence indicates that they entered Nova Scotia from the mainland, appearing first in the central portion adjoining New Brunswick, and spreading thence southward and northward. Several widely scattered stations report Robins as more than usually abundant after they did come, one Chicago observer going so far as to say, "Never saw so many Robins in the spring as this year—at least ten to every one seen in previous springs." The Mississippi Valley dates average several days ahead of those of the same latitude along the Atlantic coast.

The Red-winged Blackbird dates seem more irregular as a series than the Robin dates. This is perhaps due to the Blackbird's being more gregarious and less scattered than the Robin; if the observer misses the two or three flocks of Red-wings in his locality, he misses the species. Many more are usually seen on the first day than is the case with the Robin.

The Phoebe, needing as it does plenty of gnats or other flying insects, is naturally the last of these three species to be noted. In many places where it is a regular summer resident it is never really common, just a pair or two nesting here and there.—CHARLES H. ROGERS.

POSTSCRIPT.—Nine reports were received too late for tabulation. The last reached us on May 4, long after the copy had gone to press. The Red-winged Blackbird was recorded as not yet common at Reaboro, Ont., Apr. 18 (E. W. Calvert), nor at Detroit, Mich., Apr. 26 (Mrs. F. W. Robinson).—C. H. R.

Reports were received from the following localities and persons:

Atlantic Coast District.

Kennett Square, Chester Co., southeastern Pa.—C. Aubrey Thomas.
 West Chester, Chester Co., southeastern Pa.—Isaac G. Roberts.
 York, York Co., southeastern Pa.—David W. Sunper.
 Englewood, Bergen Co., northeastern N. J.—John Treadwell Nichols.
 Central Park, New York City, southeastern N. Y.—John Treadwell Nichols.
 Bay Ridge, New York City, southeastern N. Y.—Mrs. F. V. Abbott.
 Port Chester, Westchester Co., southeastern N. Y.—Samuel N. Comly, Paul C. Spofford, James C. Maples.
 New Haven, New Haven Co., central southern Conn.—Aretas A. Saunders.
 Block Island, in the Ocean off R. I.—Elizabeth Dickens.
 Waterbury, New Haven Co., western central Conn.—Mrs. A. A. Crank, R. E. Platt, Mrs. Nelson A. Pomeroy.
 Bournedale, Barnstable Co., southeastern Mass.—Anna M. Starbuck, N. B. Hartford, Ethel L. Walker.
 Grafton, Worcester Co., eastern central Mass.—T. P. Staples.
 River Hebert, Cumberland Co., western central N. S.—J. H. Fitch.
 Bass River, Colchester Co., central N. S.—William A. Doane.
 Truro, Colchester Co., central N. S.—L. A. DeWolfe.
 Wolfville, Kings Co., central N. S.—H. G. Perry.
 Milton, Queens Co., southern N. S.—R. H. Wetmore.
 Yarmouth, Yarmouth Co., southern N. S.—E. Chesley Allen.
 Antigonish, Antigonish Co., eastern N. S.—Harrison F. Lewis.

Hudson and Connecticut Valleys.

Rhinebeck, Dutchess Co., southeastern N. Y.—Maunsell S. Crosby.
 Williamstown, Berkshire Co., northwestern Mass.—Wm. J. Cartwright.
 Bennington, Bennington Co., southwestern Vt.—Lucretius H. Ross.
 Saratoga Springs, Saratoga Co., central eastern N. Y.—Mrs. H. M. Herrick.
 St. Albans, four miles north of, Franklin Co., northwestern Vt.—Lelia E. Honsinger.
 Lancaster, Coös Co., northwestern N. H.—Thomas W. Wallace.

Ohio Valley.

Urbana, Champaign Co., central eastern Ill.—Frank Smith and collaborators.
 Stafford Twp., Greene Co., southeastern Ind.—Mrs. Stella Chambers.
 Lexington, Fayette Co., northern central Ky.—Victor K. Dodge.
 Columbus, Franklin Co., central Ohio.—Laura E. Lovell.
 Huron, Erie Co., central northern Ohio.—H. G. Morse.
 Pittsburgh, within 10 miles of, Allegheny Co., central western Pa.—Thos. D. Burleigh.
 Youngstown, Mahoning Co., northeastern Ohio.—Volney Rogers.
 Meadville, Crawford Co., northwestern Pa.—F. Cecil First.
 Little Valley, Cattaraugus Co., southwestern N. Y.—Mary M. Bedient.
 Geneva, Ontario Co., southwestern N. Y.—Otto McCreary.
 Lyons, Wayne Co., southwestern N. Y.—S. B. Gavitt.
 Kingston, Frontenac Co., southeastern Ont.—E. Beaupre.

Mississippi Valley.

Lafayette Co., central eastern Mo.—Dr. Ferdinand Schreimann.
 Wichita, Sedgwick Co., central southern Kan., Audubon Society of Fairmount College

Mississippi Valley, continued.

Chillicothe, Livingston Co., central northern Mo.—Desmond Popham.
 Zuma Twp., Rock Island Co., northwestern Ill.—J. J. Schafer.
 LaGrange, Cook Co., northeastern Ill.—Edmund Hulsberg, James Watson.
 Chicago, Cook Co., northeastern Ill.—C. L. Cheney, Wilfred Lyon.
 Rockford, Winnebago Co., central northern Ill.—Norman E. Nelson.
 Lauderdale Lakes, Walworth Co., southeastern Wis.—Lula Dunbar.
 Viroqua, Vernon Co., southwestern Wis.—R. Spellum.
 Milwaukee, Milwaukee Co., southeastern Wis.—Mrs. Mark L. Simpson.
 Madison, Dane Co., central southern Wis.—A. W. Schorger, N. de W. Betts.
 Sheridan, Waupaca Co., central Wis.—Katherine Johnson.
 Newberry, Luce Co., northeastern Mich.—Ralph Beebe.
 Lennox, Lincoln Co., southeastern S. D.—W. B. Mallory.
 Fargo, Cass Co., southeastern N. D.—Miss N. S. Evans, Edna M. Stevens, O. A. Stevens.
 Palisades, Mesa Co., central western Colo.—J. L. Sloanaker.
 Seattle, King Co., central western Wash.—F. W. Cook.

ROBIN

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Kennett Square, Pa.	March 12	1	March 14	1	March 15
West Chester, Pa.	March 15	3	March 16	2	March 17
York, Pa.	March 16	4	March 17	3	March 21
New York City and vicinity	March 15	10	March 16	8	March 25
New Haven, Conn.	March 15	35	March 17	24	March 27
Block Island, R. I.	March 21	1	March 28	2	March 29
Waterbury, Conn.	March 15	1	March 21	12	March 28
Bournedale, Mass.	Jan. 18	1	Feb. 27	1	March 31
Grafton, Mass.	March 24	9	March 26	2	March 28
River Hebert, N. S.	March 7	1	March 15	1	April 1
Bass River, N. S.	March 28	15	March 31	25	April 7
Truro, N. S.	March 23	1	April 7	2	April 8
Wolfville, N. S.	March 29	1	April 2	2	April 5
Milton, N. S.	March 26	1	March 29	several	April 5
Yarmouth, N. S.	April 1	1	April 5	many	April 5
Antigonish, N. S.	March 26	1	March 28	5	April 9
<i>Hudson and Connecticut Valleys</i>					
Rhinebeck, N. Y.	March 16	1	March 17	1	March 28
Williamstown, Mass.	March 26	4	March 27	20	March 27
Bennington, Vt.	March 26	2	March 27	hundreds	March 27
Saratoga Springs, N. Y.	March 27	3	March 29	10	April 5
St. Albans, Vt.	March 27	1	March 29	1	..
Lancaster, N. H.	March 28	1	March 29	2	April 10
<i>Ohio Valley.</i>					
Urbana, Ill.	March 3	1	March 6	3	March 14
Stafford Twp., Greene Co., Ind.	Feb. 10	1	March 6	3	March 13
Lexington, Ky.	Feb. 20	1	March 7	6	March 12
Columbus, Ohio.	Feb. 7	2	March 10	8	March 14
Youngstown, Ohio.	March 14	1	March 15	12	March 15
Huron, Ohio.	March 8	1	March 9	1	March 14
Pittsburgh, Pa., and vicinity	Feb. 14	1	March 15	10	March 16
Southwestern New York.	March 16	15	March 17	common	March 17
Kingston, Ont.	March 28	5	March 30	13	March 30

ROBIN, continued

	First seen	Number	Next seen	Number	Becomes common
<i>Mississippi Valley.</i>					
Lafayette Co., Mo.....	Feb. 20	50	Feb. 22	20	March 8
Wichita, Kan.....	March 2	7	March 4	20	March 4
Livingston Co., Mo.....	March 3	1	March 5	2	March 15
Zuma Twp., Rock Island Co., Ill.....	March 11	1	March 14	2	March 15
Chicago, Ill., and vicinity...	March 11	1	March 14	4	March 15
Rockford, Ill.....	March 7	15	March 14	5	March 16
Lauderdale Lakes, Wis.....	March 14	2	March 15	4	March 17
Viroqua, Wis.....	March 12	1	March 13	2	March 15
Milwaukee, Wis.....	March 15	1	March 16	8	March 21
Madison, Wis.....	March 14	1	March 15	7	March 25
Sheridan, Wis.....	March 14	1	March 25	1	April 7
Newberry, Mich.....	April 1	12	April 2	25	..
Lennox, S. D.....	March 15	1	March 16	4	March 25
Fargo, N. D.....	April 1	1	April 4	1	..

RED-WINGED BLACKBIRD

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Kennett Square, Pa.....	March 15	2	March 22	3	March 27
West Chester, Pa.....	March 17	12	March 27	1	April 4
York, Pa.....	March 21	1	March 22	2	March 27
New York City and vicinity.	March 17	2	March 18	2	March 28
New Haven, Conn.....	March 21	18	March 25	42	March 27
Block Island, R. I.....	March 21	10	March 24	1	March 25
Waterbury, Conn.....	April 1	1	April 2	2	..
Bournedale, Mass.....	March 29	2	March 30	2	April 3
Grafton, Mass.....	March 27	1	April 1	7	April 2
Nova Scotia.....	None seen	by April	10.		
<i>Hudson and Connecticut Valleys</i>					
Rhinebeck, N. Y.....	March 25	several	March 27	several	March 28
Williamstown, Mass.....	March 31	1	April 4	5	..
Bennington, Vt.....	April 4	5	April 5	8	April 9
Saratoga Springs, N. Y.....	April 5	12	April 10	2	..
St. Albans, Vt.....	April 10	4	..	..	..
Lancaster, N. H.....	None seen	by April	13.		
<i>Ohio Valley.</i>					
Urbana, Ill.....	March 14	50	March 15	25	March 14
Stafford Twp., Greene Co., Ind.....	March 14	4	March 15	8	March 19
Lexington, Ky.....	Feb. 24	1	March 25	1	March 30
Columbus, Ohio.....	March 20	5	March 25	2	..
Youngstown, Ohio.....	March 16	1	March 17	5	March 18
Huron, Ohio.....	Feb. 22	35	March 6	1	March 15
Pittsburgh, Pa., and vicinity	March 26	8	March 28	10	April 4
Southwestern New York....	March 18	1	March 22	3	March 26
Kingston, Ont.....	March 28	200	..	..	March 28

RED-WINGED BLACKBIRD, continued

	First seen	Number	Next seen	Number	Becomes common
<i>Mississippi Valley.*</i>					
Lafayette Co., Mo.....	Feb. 25	8	March 1	35	March 10
Wichita, Kan.....	March 8	7	March 9	8	March 15
Chillicothe, Mo.....	March 19	3	March 21	12	March 25
Zuma Twp., Rock Island Co., Ill.....	March 14	12	March 15	50	March 15
Chicago, Ill., and vicinity...	March 14	2	March 15	110	March 15
Rockford, Ill.....	March 24	3	March 26	4	March 28
Lauderdale Lakes, Wis.....	March 2	8	March 8	8	March 2
Viroqua, Wis.....	April 13	200	April 14	42	April 13
Milwaukee, Wis.....	March 31	6	April 8	3	April 13
Madison, Wis.....	March 10	3	March 15	80	March 22
Sheridan, Wis.....	March 29	flock	March 31	flock	April 5
Newberry, Mich.....	Accidental here.				
Lennox, S. D.....	March 15	12	March 17	15	March 20
Fargo, N. D.....	April 5	1	..	..	..

*The records from the Great Plains are of another subspecies, the Thick-billed Red-wing.

PHOEBE

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Kennett Square, Pa.....	March 16	2	March 22	2	March 27
West Chester, Pa.....	March 16	1	March 25	1	April 2
York, Pa.....	March 27	2	April 7	1	April 9
New York City and vicinity.	March 17	1	March 22	2	March 30
New Haven, Conn.....	March 27	2	March 31	3	..
Block Island, R. I.....	Occurs only in migration.				
Waterbury, Conn.....	March 27	1	March 29	2	April 10
Bournedale, Mass.....	March 6	1	March 9	1	April 7
Grafton, Mass.....	March 27	1	March 26	2	March 31
Nova Scotia.....	None seen by April 10.				
<i>Hudson and Connecticut Valleys</i>					
Rhinebeck, N. Y.....	March 28	2	March 29	3	April 8
Williamstown, Mass.....	None seen by April 10.				
Bennington, Vt.....	April 5	3	April 6	1	..
Saratoga Springs, N. Y....	April 5	1	April 13	6	April 13
St. Albans, Vt.....	None seen by April 10.				
Lancaster, N. H.....	April 11	1	April 12	3	..
<i>Ohio Valley.</i>					
Urbana, Ill.....	March 15	1	March 24	1	April 3
Stafford Twp., Greene Co., Ind.....	March 15	1	March 28	2	..
Lexington, Ky.....	March 11	1	March 29	1	April 3
Columbus, Ohio.....	March 25	2	March 26	4	March 29
Youngstown, Ohio.....	March 17	1	March 22	1	March 27
Huron, Ohio.....	March 22	1	March 25	1	..
Pittsburgh, Pa., and vicinity	March 15	1	March 28	5	April 7
Southwestern New York....	April 1	1	April 4	1	..
Kingston, Ont.....	March 22	2	April 28	4	..

PHŒBE, continued

	First seen	Number	Next seen	Number	Becomes common
<i>Mississippi Valley.</i>					
Lafayette Co., Mo.....	March 15	1	March 17	2	March 25
Wichita, Kan.....	March 29	1	April 5		..
Chillicothe, Mo.....	March 27	2	March 28	2	March 30
Zuma Twp., Rock Island Co., Ill.....	March 29	6	April 7	2	..
Chicago, Ill., and vicinity...	March 29	3	March 30	1	April 4 .
Rockford, Ill.....	March 28	1	April 3	2	April 5
Lauderdale Lakes, Wis.....	March 26	1	March 29	1	..
Viroqua, Wis.....	March 28	3	April 4	7	April 10
Milwaukee, Wis.....	April 3	3	April 5	4	April 14
Madison, Wis.....	March 29	2	April 5	1	..
Sheridan, Wis.....	March 26	1	March 30	1	April 8
Newberry, Mich.....	Rare.				
Lennox, S. D.....	None seen	by April	10.		
Fargo, N. D.....	None seen	by April	10.		

Palisades, Colo.

San Diego Red-wing, winter resident in small numbers.

Western Robin, first (one) seen Feb. 22; becomes common March 25.

Say's Phœbe, first (one) seen March 25.

Seattle, Wash.

Northwestern Red-wing, first (7) seen April 5.

Western Robin, wintered in some numbers, becomes common March 29.



Notes from Field and Study

An Owl Refugee on a Battleship

When the U. S. S. New Jersey was hurrying down to Mexico, last October, to aid American refugees, the first passenger it received was an Owl. This happened while the ship was off northern Florida, about sixty miles from the coast. A fresh breeze was blowing from the land, causing a steady roll, which must have made it difficult for him to alight on the yard-arm of the mainmast, particularly as he came about two A.M., when it was very dark and the ship's lights were confusing.

There he gravely sat while the masts swept backward and forward and the wind whistled around the wires. The interest of the sailors did not affect him in the least, in spite of the fact that it kept the officers busy restraining some of those who climbed aloft from trying to catch him. The reports of the men on his size, color, etc., varied greatly, although all agreed that he had a white breast, with no bars or stripes of any kind, and that he was rather small, smaller than a chicken, anyway. The man who finally climbed up after him in the afternoon of that day said that the top of his head was smooth and round—but others were sure it had horns. Mr. Owl started from the ship with the wind, as though bound for Africa, poor fellow.—J. W. LIPPINCOTT, *Bethayres, Pa.*

The Hummer and His Shower-bath

The day was hot—too hot to remain indoors; so, taking our chairs and moving to the shady side of the house, we hoped by putting to use the lawn-sprinkler to cool the air and the surroundings.

As we were thus comfortably seated, whom should we see but our tiny friend, the Ruby-throat, who also wanted the enjoyment of the water. Alighting on a scarlet sage in blossom, where he could be

sprinkled, he would hang back-downward by his feet, sometimes losing his hold and falling to the ground, but always succeeding in regaining his perch.

After watching this performance, I at last approached him, expecting to see him fly or, at least, attempt to do so; but no, acting almost as if tipsy, he seemed not to notice me. Picking the little fellow up gently, I carried him in my open hand out of range of the water, to show the others. He seemed to be injured. I was thinking that possibly he was hurt by his falls. When, unawares, with a *whirr* he was off; but, alighting in a nearby pine, he commenced the pruning of his feathers.

About an hour later he was again seen at his shower, repeating the same performance.—FRED W. KENESSON, *Remlig, Jasper Co., Texas.*

The Early Woodcock

In New Jersey and Pennsylvania there comes a time, each March, when the ground suddenly gives up the hard ice it has been holding and allows the earthworm once more to come to the surface. Right after this comes the mole, and then the Woodcock—every time.

I watch a certain patch of meadow in south Jersey which lies behind a mill and a great hedge in such a way as to catch all the sun and none of the cold wind. Here the Woodcock come first each year, and here five appeared on March 15, in the midst of a beautiful warm spell. That was very fine for the birds, and boring was easy, but five days later it blew up cold, with four inches of soft snow, and a biting gale to pierce the snugest corners all through the following night.

I wondered what had happened to the Woodcock and, finding no tracks near the mill in the early morning, wandered over the pine barrens and the swamps nearby, until I finally found where one had lit in an opening of the woods the [night

before and walked to windward through the snow, until he came to a sheltering bunch of leaves beside which he could snuggle among the snowflakes and avoid the wind. He had fairly plowed his way those ten yards, often throwing out a wing to steady his short steps as he wound in and out among some sweet-fern twigs. The resting-place was absolutely hidden from above, and left very snug by the bird's slipping in without disturbing the snow more than to stamp it down underneath.

In the early morning hours he had walked sedately out, turned once more into the wind and threaded his way farther into the pines, twice making a wing mark where he stumbled on hidden twigs, and leaving a furrow in the snow much like that of a weasel when walking. In a tangle of small bushes he had taken wing so hastily as to leave a downy feather on a twig.

Later in the day, a small patch of grass showed through the snow behind the mill, and three Woodcock appeared, as if by magic, to bore for the succulent worms. Yes, the early Woodcock knows how to provide for himself.—JOSEPH W. LIPPINCOTT, *Bethayres, Pa.*

The Starling at Glens Falls, N. Y.

It may be of interest to record that the Starling has arrived in Glens Falls. A small flock was found in the vicinity of the railway station during the recent February blizzard. One of the birds was so exhausted that it fell down in the snow, was captured, and is now contentedly wintering in the D. & H. freight station here.—GERTRUDE B. FERGUSON, Secy. of the Glens Falls Bird Club.

Starlings and Cows

In answer to a request in BIRD-LORE for information regarding the Starlings' custom of flying around cows after the manner of Cowbirds, I should like to give my experience. This is not a new habit. I have seen Starlings alight on the backs of

cows and sheep, to procure insects, in the Pevensey Marshes, Sussex, England.

To quote Wood's *Popular Natural History*: "These birds have a habit of following cows, sheep, and horses, fluttering about them as they move, for the purpose of preying upon the insects which are put to flight by their feet. The Starlings also perch upon the backs of the cattle, and rid them of the parasitic insects that infest them."—CECIL DIPLOCK, *Plainfield, N. J.*

The Grackle as a Nest-robber

Being very much interested in the study of our native birds, I thought I would send you a short note on what seemed to me the unusual habits of a Bronzed Grackle.

In the latter part of June and for at least the first half of July, 1911, this Bronzed Grackle regularly, every four or five days, visited the houses on the west side of our street, always beginning at the south and finishing up at the north end of the block. He would alight on the veranda roof, enter the nests of the English Sparrows built in the corners, and, after eating the eggs and young, he would emerge, stand for a moment or two, ignoring the throng of distracted Sparrows, and fly to the next house, where the scene would be repeated. We would always know when he was out visiting by the shrieking of the Sparrows. On no occasion did the latter attempt to attack him, though a flock of about a score followed him from house to house. They would perch around on the wires, and make as much noise as possible while he was lunching.

About the middle of July I had to leave the city, and on my return in early September the Grackle had disappeared. I have never seen him since, nor do I know if he robbed nests on any other streets. Why he visited only the west side of the street is a mystery, for Sparrows' nests were abundant on both sides.

He was certainly the coolest, most methodical, and heartless nest-robber I

have ever seen or heard of.—J. NELSON
GOWANLOCK, *Winnipeg, Man.*

Evening Grosbeaks Near Port Chester,
N. Y.

There was a flock of eight Evening Grosbeaks about this vicinity the last two weeks in February and the first week in March of this year. They could be seen nearly every morning up in the box-elder trees by the house, eating the seeds. They were very tame, allowing us at times to get within fifteen feet of them, and in this way we have made their identification positive.

We have seen these birds near here on two other occasions, namely, January 8, 9, 1911, and November 29, 1913.—JAMES C. MAPLES, SAMUEL N. COMLY, W. BOLTON COOK, RICHARD L. BURDSALL, PAUL C. SPOFFORD, *Port Chester, N. Y.*

Redpoll in the District of Columbia

In the January-February number of BIRD-LORE, the latest date of the Redpoll seen in the District of Columbia is given as February 12, 1899.

On March 9, 1914, I, together with Raymond W. Moore, of Kensington, Md., saw a Redpoll (*Linaria*) feeding on the seeds of a clump of alders on Chevy Chase Drive, D. C.; and on the following Wednesday morning, March 11, we together with Mr. and Mrs. Leo D. Miner, of Washington, saw four Redpolls on the same clump of alders, and observed them for ten minutes or more through our field glasses at a distance of fifteen to twenty feet. It was snowing hard at the time.

Prof. Wells W. Cooke, reports that this is the third record in sixty years for the Redpoll in D. C.—SAM'L W. MELLOTT, M.D., *Chevy Chase, Md.*

A Summer Visitor

It was in the summer of 1906, in a small village in northern Pennsylvania, that I first became really acquainted with a

Chipping Sparrow. I had always noticed how dapper and bright the little fellows looked, but never knew what friendly little birds they were until this one came to us.

One morning, as we were sitting on the porch of our summer home, a dainty little song broke forth near us. We listened breathlessly for a moment, and again the happy song sounded, and a dear little Chipping Sparrow lit on the railing of the porch and cocked his head on one side, as much as to say, "Well, how do you do, folks?" We happened to have some freshly baked caraway-seed cakes in our hands, just feasting on their crisp goodies, and purely to tempt him we scattered a few crumbs on the porch floor. Judge of our surprise when the little fellow, with an excited little 'chip,' hopped down and began greedily to eat them. After satisfying his hunger, he flew upon the railing and sang a polite little "thank you," and then flew away.

The next day and the next he came for crumbs. By that time we had begun to keep crumbs on the window-sill for him, but the Sparrows found that out, and quarreled and fought over them until we had to stop leaving them there for the little guest. Each day he would come, light on the ridge of the roof of the house next door and call. If we answered, down he would come, eager for crumbs. We talked to him as we would to a child, and when crumbs were not on the porch we would tell him to wait a minute while we went in to get them. Whether he understood or not I do not know, but at least he stayed and hopped to meet us, eating the crumbs from our hands.

Mornings, my father would go down stairs early, whistle a clear, sharp call, and down the little fellow would come, light on the arm of father's chair, and while father whistled the tiny bird would throw back his head and sing with all his might.

I used to sit on the floor, crumbs in my lap, and the little fellow would hop up into my lap and eat. He was very, very partial to cooky crumbs, and

when we gave him bread would leave in disgust.

One day a heavy thunder-storm came up just as he called to us from the neighboring roof, and then, in answer to our whistle, he came straight to the chairs where mother and I were sitting, hopped onto one of the rounds of the chair under her, and sat huddled up there during the entire storm, as if frightened. After it was over, out he came and sang to us his own inimitable song.

Every night he came at dusk to sing good-night. How we grew to watch for him and love him! One day he brought two tiny baby chipping birds to the porch. It was slow, hard work for him to coax the little midgets onto the porch floor, but finally the two fluffy, speckled little things were in the midst of a pile of crumbs and seeing that they were all safe and busy, off he flew. He brought them every day for a week or more, and then one day he didn't come. How we watched and waited for him for nearly two weeks! We were so lonesome without him, and so afraid he had been caught. Each evening we would call him, but no little "cheep" would reward us.

One evening, just at dusk, when we had given up ever seeing him again, we were all startled by a familiar little call. Jumping up, we ran to the porch railing and called, and from out of an old pear tree in the end of the yard came the dear little fellow straight for the porch. He lit on the railing, threw back his head, and oh, how he did sing! For at least fifteen minutes he stayed, holding us entranced by his song, and then, with a goodnight 'cheep,' he was gone, and for the rest of the summer we waited and watched for him in vain.—MABEL FOOTE WITMAN, *Washington, D. C.*

Some Wrens' Nests

The accompanying photographs of House Wrens were taken early in July, 1913. I had heard that there were a couple of pairs of Wrens nesting near a certain residence, so, taking my camera, I came there one sunny afternoon. The first nest was in a birdhouse, high up under the eaves of the house, and inaccessible.

The owners of the place had a tennis-court at one side, and there were back-stops of chicken-wire, upheld by iron



HOUSE WREN

pipes, which were fastened together at their upper ends with horizontal pipes connected to the others with the regular connections. In one of the end pipes the second pair of Wrens had made their nest. The entrance was from one side, through the iron connection, and the bird, after entering, dropped down in the vertical pipe about ten inches to its nest.

Now came the photographing of the bird. I borrowed a step-ladder from the owner of the residence and set it up near the entrance to the nest. Upon the steps of this I placed and fastened the legs of

my camera tripod. Then I focused my camera, from the tripod, using the single lens, on the hole, about three feet away, and fastened a thread to the shutter. I waited, holding the end of the thread, at a distance of about twenty feet. The female Wren (I imagine it was she, since only one bird appeared) went right in with food to feed her young, not minding the click of the shutter in the least. Then I moved the ladder and camera nearer, and with the double lens got still better pictures, releasing the shutter with the bulb. In one of these the bird was so tame that I had my hand, holding the bulb, within a foot of it, with no attempt

attention, this time in a more unusual place. This pair had built their nest in a home-made, wooden mail-box on the front porch of another house. The Wren entered through the slot, which was about three-quarters of an inch wide. The lady of the house was so afraid that I would frighten the birds so that they would desert their nest that she refused me permission to photograph it.—WINTHROP CASE, *Hubbard Woods, Ill.*

Harris's Sparrow in Northwestern Illinois

On March 15, 1914, I visited a large hedge-fence near where we live, to look for new bird arrivals from the South.

Starting at the west end, and walking east along the south side, I did not see anything but a few Tree Sparrows and two Bluebirds. When near the east end, which is in a slough, a flock of about a dozen Bob-whites was flushed, and, after watching them disappear, I again looked at the fence and saw a large Sparrow sitting on a limb about ten yards from where I was standing. It had its breast toward me and sat very quiet, giving me an excellent opportunity to observe it with my field-glass.

I noticed that the bill was pinkish, the crown, throat, lores, and breast, glossy black; the belly white. and the sides streaked with black. I observed it several minutes, and then walked east of where it was sitting, to get a side view, when it flew toward the other end of the fence. I immediately followed it, to try to get a back or side view, but did not get near enough until it reached the west end, where there were a Goldfinch and some Tree Sparrows sitting. There I



HOUSE WREN

at concealment either. Thus I took seven pictures of which two were spoiled by the Wren moving and blurring the image. I was unable to see the young, since they were down inside the pipe.

Earlier in the season, I found another Wren's nest in an exactly similar location to that just described. I attempted to photograph the Wren, but my plates did not turn out satisfactorily.

Another interesting nest came to my

again observed it from a distance of about twenty yards, and could see that it had white wing-bars. After observing it several minutes, I tried to get closer, when it again flew toward the east end of the fence. I did not follow, but hurried home to consult Chapman's 'Birds of Eastern North America.' On looking over the list of Sparrows which are not common here, I found that the description of Harris's Sparrow exactly suited the one which I had observed. This is the largest and most beautiful Sparrow I have ever seen, and is easily identified, on account of its large, size and very different markings from any other Sparrow.—J. J. SCHAFER, *Port Byron, Ill.*

Curious Actions of a Robin

Can any reader of BIRD-LORE explain the actions of a Robin as described below?

I live at West Newton, and my house has a covered porch, underneath which projects a bay-window with three sashes. Adjoining is a glass-enclosed breakfast-room on one side, and on the other a sash recessed about six feet from the floor of the porch.

Upon coming down to breakfast, April 8, we found a Robin flying repeatedly at the three windows in the bay, trying to get in, striking the glass with its bill, wings and feet. This it kept up all day long, and until darkness settled down. We tried to drive it away, fearing that it would hurt itself. When it appeared to be somewhat exhausted from its labors it would fly to the recessed window, which afforded room for it to alight on, and would then gaze into the room. Constantly throughout the day it issued its call.

The next morning it appeared promptly, and I pulled the shades down thinking that it might discourage its efforts; but when I left it was still flying toward the sash and then back to the porch-rail.

In flying against the sash, with the exception of the recessed window, there was no opportunity to alight; so that, after striking the glass with its bill, wings

and feet, it would return to the porch-rail. These efforts occurred about every ten seconds, and would last about one-half to three quarters of an hour.

When under observation, the Robin would drop to the lawn, running about a bit and returning to its futile efforts to get into the house. Nothing that we could do would discourage it.

This Robin was under observation by us for three days but it did not appear to us to be seeking self-destruction. It was apparently careful in striking the window not to injure itself. But for fear that it would exhaust itself, other means failing, we tied cross lines in front of the window, with many fluttering streamers. The Robin did not appear to mind these particularly, though naturally it acted as though it could not quite make out why they were there, but the flutterings did not entirely discourage it in its efforts. The fourth day it acted more rationally, and since then apparently has been normal.

After erecting the streamers in front of the three windows which attracted its first efforts, it shifted its attentions to adjoining windows, but in a lesser degree.

Another reason which makes me feel that it was not trying self-destruction is that it would land on the sill of an adjoining window and call for minutes at a time.—CLARENCE B. WOOD, Boston, Mass.

A Successful Bird's Bath

Possibly a description of a birds' bath I have found to be successful may be of interest to BIRD-LORE readers.

The stones which form the support are laid up without mortar, so as to leave openings between them. These are filled with soil and ferns planted in them, and in one large opening we planted an umbrella plant, which grows very fast, as the drip from the tank keeps it well watered. The stone support is about two feet high by three feet long and eighteen inches wide. The open bathing-tank on top of the stones is ten inches wide, three feet long, and one and one-half inches

deep, made of galvanized iron. Back of the stones we drove a cedar post, leaving the post about six or eight inches above the bathing-tank. On this post we have a galvanized tank which holds three pails of water. This tank has an opening on one side near the bottom, so that the water drips from it into the bathing-tank below; this drip can be regulated to run fast or slow, according to the weather, as

bathing at once, and others waiting their turn.

The tank is in a shady corner of the lawn about thirty feet from the house. The shrubbery near the tank is a mixture of wild roses, elderberry, wild crab, cherry, and hawthorn trees. On the other side of the tank is a large bed of perennial phlox.

It is altogether the most interesting part of our yard, and we feel very well paid for the work and small expense we have been to in building it.—
HENRY P. SEVERSON, *Winneconne, Wisc.*



A SUCCESSFUL BIRD'S BATH

on hot days the birds use the tank more, and the drip can be arranged so that the lower tank is kept full. We usually fill the tank in the morning and put in an extra pail at noon, so the water is kept fresh all day. This is all the attention necessary. We have a cover on the larger tank, as the water keeps cooler.

The birds certainly like the arrangement, as it is used all day long. Very often there will be four or five birds

Bird-Houses and Lunch-Boxes

In housing and feeding our little feathered friends, we have had considerable annoyance from other birds which we do not care to provide for. Our Bluebird boxes have had no lack of renters, and several broods have been reared successfully in the last three or four years. We place them on posts of our garden fence, about eight or ten feet high, for we have discovered that the English Sparrow does not claim nests that are so low, and we manage to protect from prowling cats by covering the hollow limb of the tree which forms the house with tin sheeting for two or three feet above the top of the

fence-post, and weaving together a number of slender osage branches around the base of the house. The cats do not venture to climb over this thorny barrier, and, if they should, the tin sheeting prevents nearer approach to the little home.

For lunch-boxes we take the small, square boxes which gardeners use for berries, line them with thin cloth to prevent the food from falling out, tie stout cords to the four corners and unite them

about six inches above the box; then make a roof of heavy cardboard long enough to extend about four inches over the two ends of the box, with little slits cut into the edges so that the cords entering will hold the roof on in spite of the wind and weather, and swing the box from the limb of a tree.

The roof should not be more than three inches above the box at the 'ridge,' and should fit closely down to the sides of the box.

Sparrows are very wary birds and few of them will venture to enter a box with such a covering, the Jays can not get in, but the Chickadees and the Nuthatches fearlessly help themselves to the cracked nuts and the seeds within.
—MARION and JOHN KYLE, Xenia, Ohio.

A Drinking-Place for the Birds

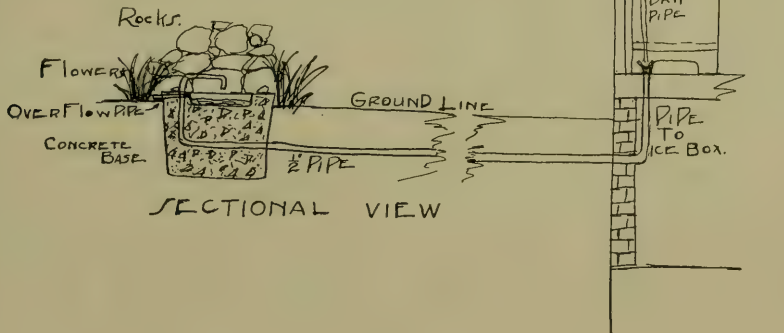
Do you ever stop to think that in the summer time, when it is very hot and the water in the nearby creek has dried up, it is very hard for the birds to find water enough to drink? They need it not only to drink, but would like to bathe in some nice cool water. It is very interesting to



THE DRINKING POOL

watch the birds when they come to drink. One should learn to know and protect them. If they find feed and water in some place today, they will be back to the same place tomorrow for more.

Some people put a pan of water and a few crumbs out, and find that many different kinds of birds come every day. The writer has made a very enticing place for the birds to drink and bathe. The



water comes from the drip of the ice-box. Where this is convenient, it eliminates all trouble with the ice-box overflow.

Any boy could get a few feet of old pipe and a few elbows from a plumber for almost nothing. This he can run from the drip underneath the ice-box and out a distance from the house, not less than ten feet. The size of the pipe should be about one-half inch in diameter, although this is immaterial. It should be laid under the surface of the ground to the drinking-place, or grotto, as it should be called.

The photograph shows the kind of grotto built by the writer. It is constructed of concrete and stone. The base is of concrete, with a basin left so that the water is from one-half to about two inches in depth. This difference in the depth of the water is mainly to accommodate both large and small birds. The rocks that are piled up and around are securely cemented together. By looking closely, you may see the pipe that carries the water from the ice-box. There is also a pipe that drains the water off when it gets to the right height.

A very good plan is to plant flowers around the grotto, such as ferns, hepaticas, violets, and nasturtium. This relieves the bareness of it, and it takes but little time and money to make this a very attractive drinking-place for the birds.—R. T. ROBINSON, *Normal, Illinois*.

Some Prospect Park Notes

In the summer of 1912, all the Ducks in Prospect Park Lake were sold. A male Black Duck had mated with a female Mallard, and they raised a brood of seven. These seven were not caught, and remained in the lake until November 20. About March 26, 1913, three of these Ducks returned to the lake. We are sure these three belonged to the seven that left in November, 1912, because of their markings. A pair mated and raised a brood of thirteen. About August 8, seven of the Ducks disappeared. The general coloration of the nine remaining is that of Black Ducks. One has the

speculum and recurved tail-feathers of the male Mallard, some have the Mallard speculum, and some the speculum of the Black Duck; all have reddish orange feet, four have light greenish yellow bills, two have orange bills mottled with greenish black, and three have the bill of the Black Duck. All have the under side of the wings white. These Ducks have become very tame.

From December 25, 1912 to January 1, 1913, a female Wood Duck was in the open water of the lake; another was seen July 20.

A Brazilian Cardinal (*Paroaria cucullata*) was in the park from May 9 to 13.

On May 13 a male Summer Tanager was seen in the park, and on September 24 a Mockingbird.

After an absence of three years, a pair of Wood Thrushes nested in the park; besides these, an unmated male stayed with us all summer.—KATE P. and E. W. VIETOR, *Brooklyn, N. Y.*

A Nest Census

On January 15, 1914, I took a walk from the old Round Tower at Fort Snelling, Minn., past the soldiers' barracks and officers' quarters, a little over a quarter of a mile. In the big elms lining the walks I counted thirty-one birds' nests. Orioles predominated, some Robins' nests, and others that I did not know. These thirty-one nests meant thirty-one pairs, or sixty-two birds. With three young to a nest—a low average—there were 93, or 155 birds total, in that quarter of a mile.—E. I. METCALF, *Minneapolis, Minn.*

Trial of Von Berlepsch Nests

Mr. Fred Adams, of Omaha, has a fine home near a natural grove. That these trees might be the better preserved from insect attacks, he secured from the manufacturer twenty-five of the von Berlepsch boxes. While the boxes are especially fitted to European species, he is gratified at his experience here.

He presented one to the writer. It was

attached to a black walnut at the edge of a grove of these trees, and placed among the limbs some ten feet above ground. We very much hoped that a pair of Bluebirds, which soon examined it, remaining several days, would settle down to family life.

The English Sparrows were very impudent, coming by the score, and no doubt were the chief cause of the sudden departure of the Bluebirds.

There followed a pair of Red-headed Woodpeckers, after enlarging the mouth of the nest a bit; a home and family duly followed. At Mr. Adams' place all the boxes were occupied—one by a Chickadee, one by a Wren that reared two families, at least. Redheads and Flickers took the rest. No Bluebirds came. Other varieties of birds in the neighborhood seemed more familiar because of the presence of these nests and occupants, such as Cardinals, Goldfinches, Grosbeaks, and Thrushes. None of these, however, took any type of the von Berlepsch boxes.—S. R. TOWNE, *Omaha, Neb.*

Thirty-second Annual Congress of the American Ornithologists' Union

The Thirty-second Annual Congress of the American Ornithologists' Union was held in Washington, D. C., April 6-8, 1914.

At the Business Meeting of Fellows, held at the Ebbitt House on the evening of the 6th, the following officers were elected: President, Dr. A. K. Fisher; Vice-Presidents, Henry W. Henshaw and Dr. Witmer Stone; Secretary, John H. Sage; Treasurer, Dr. Jonathan Dwight, Jr.; Councillors, Ruthven Deane, William Dutcher, Joseph Grinnell, F. A. Lucas, Wilfred H. Osgood, Dr. Charles W. Richmond, Dr. Thomas S. Roberts.

There being no vacancies in the list of Fellows, no election for fellowship was held. The following were elected Members: Egbert Baggett, Utica, N. Y.; Dr. Thomas Barbour, Cambridge, Mass.; Robert Thomas Moore, Haddonfield, N. J.; Robert Cushman Murphy, Brooklyn,

N. Y.; John Treadwell Nichols, New York City.

Twenty-five Associates were elected, the small number being due to the short time which has elapsed since the annual meeting of 1913.

The public sessions of the Congress, which were held at the United States National Museum, were attended by nearly one hundred members of the Union, twenty-six of these being Fellows.

The Congress of November, 1913 having afforded opportunity for reports on recent ornithological studies, the program was, in consequence, comparatively limited. It contained, however, several papers of much interest, and some which developed considerable discussion. Particularly was this true of a paper on the comparative numbers of our insectivorous birds.

While the difficulty of making anything like exact comparison of present with past conditions was recognized, the speakers on this subject were agreed that insectivorous birds were far more common now than they could possibly have been at the time of the settlement of this country; a fact which is made evident by comparing the small numbers of birds found in remaining areas of primeval forests with those which exist in farming regions, where the diversity of conditions furnished by meadow, orchard, wood-lot, crops of various kinds, etc., afford homes and food for a great variety of birds.

The speakers also agreed that in their respective experiences, extending over from twenty to thirty years, no appreciable change in the numbers of insectivorous birds, as a whole, had been observed. Local conditions, some of which were apparent, others obscure, had occasioned the decrease of some species, while others had increased; and the loss on one hand was about balanced by the gain on the other.

The members of the Union and their friends were entertained daily at luncheon by the Washington members. The Annual Subscription Dinner, which was largely attended, was held on the evening of the 7th.

The next Congress of the Union will be held in San Francisco in May, 1915. This promises to be an event of exceptional interest. Information in regard to details of transportation may be obtained in due time through the Secretary of the Union, Mr. J. H. Sage, Portland, Conn. We are sure that no member of the A. O. U. party which crossed the continent, to meet in San Francisco in May, 1903, will willingly forego an opportunity to duplicate that memorable experience.

PROGRAM

- Some Letters from Robert Kennicott. By Ernest Thompson Seton, Greenwich, Conn. (10 min.)
- On the Zonary Stomach in the Euphonias. By Alexander Wetmore, Washington, D. C. (10 min.)
- Winter Birds at Ithaca, N. Y. By Louis Agassiz Furtess, Ithaca, N. Y. (15 min.)
- Visits of Pine and Evening Grosbeaks. By Mrs. E. O. Marshall, New Salem, Mass. (10 min.)
- A Note on the Herring Gull. By John Treadwell Nichols, New York City. (15 min.)
- Side Light on the Saw-whet Owl. By Ernest Thompson Seton, Greenwich, Conn. (15 min.)
- Anatomical Notes on Trochalopecton and Sicalis. By Prof. Hubert Lyman Clark, Cambridge, Mass. (10 min.)
- The Intimidation Display of the White-breasted Nuthatch. Illustrated by lantern-slides. By Dr. Arthur A. Allen, Ithaca, N. Y. (10 min.)
- Notes on the Distribution of Breeding Egrets in the United States. Illustrated by lantern-slides. By T. Gilbert Pearson, New York City. (20 min.)
- Winter Feeding of Birds. Illustrated by lantern-slides. By B. S. Bowdish, Demarest, N. J. (30 min.)
- Ten Minutes With Lower California Birds. Illustrated by lantern-slides. By Dr. Paul Bartsch, Washington, D. C. (25 min.)
- The Curious Tail Molt of Rhinoplax. With exhibition of specimens. By Alex Wetmore. (15 min.)
- Are Our Insectivorous Birds Decreasing? Subject introduced by Dr. Frank M. Chapman, to be discussed by William Brewster, Prof. Wells W. Cooke, Waldron DeWitt Miller, Dr. Witmer Stone, and others.
- Migration in the Mackenzie Valley. Illustrated by lantern-slides. By Prof. Wells W. Cooke, Washington, D. C. (30 min.)
- A Trip to Pelican Island, Florida. Illustrated by lantern-slides. By Ernest Thompson Seton, Greenwich, Conn. (20 min.)
- With the Terns on Bird Key, Tortugas. Illustrated by lantern-slides. By Dr. Paul Bartsch, Washington, D. C. (15 min.)
- Ten Minutes with the Birds of the District of Columbia. Illustrated by lantern-slides. By Dr. Paul Bartsch, Washington, D. C. (10 min.)
- Random Notes on Bird Preservation. Illustrated by lantern-slides. By Edward H. Forbush, Westboro, Mass. (25 min.)
- Results of the Federal Bird Migration Regulations. By Dr. T. S. Palmer, Washington, D. C. (30 min.)
- The American Museum's Expeditions in South America. By Dr. Frank M. Chapman, New York City. (30 min.)

A Course in Bird-Study

A course in bird-study has been given regularly every summer for the last eight years at the Biological Laboratory of the Brooklyn Institute of Arts and Sciences. The Laboratory, which is located at Cold Spring Harbor, Long Island, New York, is thirty miles east of New York City, on an arm of Long Island Sound. In the immediate vicinity are four fresh-water lakes, sphagnum bogs, pine barrens, forest-clad hills, scrubby pastures, and salt marshes, as well as the shore of the Harbor. This variety of habitat is conducive to a varied list of birds. The Green Heron, Black-crowned Night Heron, and Spotted Sandpiper, as well as a great many species of land birds nest in the vicinity.

The course, which consists of some twenty lectures and of daily excursions for field-study, is in charge of Mrs. Alice Hall Walter, co-author of 'Wild Birds in City Parks,' and editor of the Audubon School Department of BIRD-LORE. The course will be given again this coming summer, beginning July 1, and continuing to August 12. Mrs. Walter will be assisted by Dr. C. E. Ehinger, of the State Normal School of West Chester, Pa.

Several of the lectures will be given by Professor H. E. Walter, of Brown University.

A summary of the lectures is as follows: Classification, with particular reference to North American birds; ancestry; anatomy, based upon the evolution of the skeleton and the adaptation of structure to environment; plumage and molts, showing the development of the different kinds of feathers and their uses; songs; nesting-habits; food-habits, with especial reference to economic ornithology; protection; theories and facts of migration; distribution (1) in general, (2) within limited areas; general and particular methods of study adapted to wide or restricted areas, together with practical suggestions for bird-study in schools. A collection of books, pamphlets, etc., dealing with birds and bird-study will be exhibited, discussed, and placed at the disposal of students taking this course; also, a collection of nests.

Excursions for the summer of 1914 are as follows, subject to conditions of weather and the regular schedule of work: Gardiner's Island, Lake Ronkonkoma; Oak Beach or Fire Island; the Brooklyn Museum; American Museum of Natural History, or Bronx Park, as the class may choose.

During the six weeks, a beginner can get an introduction into ornithology, and can become more or less familiar with some sixty species of nesting-birds. In addition to learning to identify by eye and ear the birds in the field, much work is done toward obtaining accurate and complete data, first-hand, concerning the habits and behavior of the birds of the

vicinity. A nesting-chart is made each season, together with a list of species identified. Last summer, more than three hundred and fifty nests, either in use or abandoned, were located and identified. Special observations have to do with decline of song, changes in feeding-habit, and occurrence, early fall migration movements, late nesting records, and the post-nuptial molt.

In addition to the field-work outlined above, particular attention is paid to the identification of trees and all forms of vegetation which furnish nesting-sites, nesting-materials, or food for the birds.

The course is especially valuable for teachers of nature-study, and each summer a number of teachers avail themselves of the unusual opportunity to add to their efficiency in this very enjoyable way.—G. CLYDE FISHER, *American Museum of Natural History, New York City.*

European Widgeon in Ohio

On April 5, 1914, with Mr. Ed. Hadelor, I discovered four Ducks upon the river, and succeeded in reaching the thin fringe of willows at the water's edge, where we could watch them with our glasses at close range.

Two were female Baldpates, the third an adult male Baldpate, while the fourth, being a red-headed 'Baldpate' with blackish chin and throat, staggered us for awhile; but upon consulting a pocket-guide, and later other works, we were assured that we had seen a European Widgeon in adult male plumage. I am glad to say we made the most of this opportunity until the Ducks were startled by a boy appearing across the river.

This particular specimen had as white a 'pate' as the Baldpate, the rest of the head and neck being so distinctly reddish brown as to attract notice at once. This changed to blackish on chin and throat. The back, sides and flanks were so finely lined with black upon white as to appear a French gray; the breast was a light cinnamon, belly white, the tail black.—E. A. DOOLITTLE, *Painesville, Lake Co., Ohio.*

Book News and Reviews

DISTRIBUTION AND MIGRATION OF NORTH AMERICAN HERONS AND THEIR ALLIES. By WELLS W. COOKE. Bulletin No. 45, Biological Survey. 70 pp., 21 maps in text. 1913.

Through an oversight this important publication has not before been noticed in BIRD-LORE. It treats of the Ibises, Jabiru, Flamingo and Roseate Spoonbill, as well as the Herons, and includes all the species of these groups found from Panama northward. When any of these birds are found south of Panama their South American as well as North American range is given.

The ranges of all the species regularly occurring in the limits prescribed are given in great detail, and are graphically illustrated by a series of most instructive maps. The localities from which a species is recorded are entered on the map of its distribution, and the symbols employed readily enable one to determine whether the bird occurs at the point marked, as a breeder, in summer, in winter, etc.

Comparatively few of the species treated are strictly migratory, those which breed from southern Florida and south-eastern Texas and southward being found as species, throughout the year. There is, however, more or less wandering, and, with some species, a curious northward movement after the breeding season.

Professor Cooke calls due attention to this post-breeding 'migration' and adds: "A still more remarkable migration habit is that of the Snowy Egret. Numbers of these birds migrate in the spring far north of the breeding range, and remain throughout the summer in these northern districts as non-breeders."

This Bulletin takes its place with similar ones prepared by Professor Cooke for the Biological Survey, on the shore-birds, Ducks and Geese, Warblers, etc., and is a mine of information for anyone who would know where and when the birds it deals with may be found. Let us hope that others will soon appear.—F. M. C.

FIELD NOTE-BOOK OF BIRDS. By A. H. WRIGHT and A. A. ALLEN. Department of Zoölogy, Cornell University. Including Outlines for the Recording of Observations, and Sheets for Preserving a Check-List of Birds Seen. For Sale by the Cornell Co-operation. Ithaca, N. Y. Price 50 cents, postage 4 cents.

This field book is intended primarily to receive one's observations on the color, form, actions and notes of strange birds as a means to their identification. Each page of the body of the book is headed by an outline representing a generalized figure of a passerine bird, Woodpecker, Gull, wading-bird, shore-bird, Duck or Hawk. A model sheet explains how these outlines are to be filled in, and also how the remainder of the page may be utilized in recording data on habits, distribution, nest, etc. Tables giving 'The Average Date of Spring Arrivals of Birds at Ithaca' and 'Earliest Nesting Dates for Ithaca,' and ruled pages for a check-list roll-call are added. The whole makes an attractive and practical booklet well designed to aid the field student both in observing and recording.—F. M. C.

CASSINIA: PROCEEDINGS, DELAWARE VALLEY ORNITHOLOGICAL CLUB, XVII, 1913. [Issued March, 1914.] pp. 1-68; 1 plate.

'Cassinia' for 1913 opens with one of Witmer Stone's always acceptable contributions to the literature of biographical ornithology, if this term may be used in contradistinction to ornithological biography! He writes of Alexander Wilson, and reminds us of the remarkable fact that his "entire ornithological career, from the day he announced his intention of making a collection of 'all our finest birds,' to his premature demise [at the age of forty-seven], covered but ten years!" Mr. Stone speaks especially of a statue of Wilson by Alexander Calder, now in the Academy of Natural Sciences of Philadelphia, and makes the admirable

suggestion that a life-size cast in bronze be made of this statue and placed in the new Parkway which will pass in front of the Academy. A half-tone plate of the statue illustrates Mr. Stone's article.

Henry W. Flower's paper on 'Some Local Fish-eating Birds' contains much interesting information concerning the food habits of 25 species of birds.

In 'The Ovenbird's Call-Song,' Robert Thomas Moore presents an addition to his studies of the songs of American birds. Annotated records of eleven songs or types of songs are presented; but, accurate as they doubtless are, we feel that this method of rendering bird-notes can never make so strong an appeal to one's imagination as does such an apt bit of syllabification as Mr. Burroughs' (whose name is consistently misspelled "Borroughs") 'Teacher, *Teacher*, TEACHER, TEACHER, *TEACHER*!' This statement, however, is in no wise intended to detract from the value of Mr. Moore's important studies.

Samuel N. Rhoads' discovery of 'The Snow Hill Bird-Roost' near his own home shows that the most observant student never gets to the end of the possibilities of even a locally restricted area.

'A Census of the Turkey Vulture in Delaware,' by Charles J. Pennock, a 'Report on the Spring Migration of 1913,' compiled by Witmer Stone, an 'Abstract of the Proceedings of the Delaware Valley Ornithological Club, 1913,' 'Club Notes' and Bibliography for 1913, conclude the number.

We note that the reports of attendance at the regular meetings of the Club read, "Thirty-five members and two visitors present;" "one visitor and twenty-one members present," etc., whereas one member and twenty-one visitors present is a condition which sometimes prevails in allied organizations!—F. M. C.

BIRDS OF THE THOMAS COUNTY [NEBRASKA] FOREST RESERVE. By JOHN T. ZIMMER, Proceedings Nebraska Ornithological Union, V, 1913, pp. 51-104.

If the efforts of the United States Forest Reserve are successful, the region in which

these studies are made will, in due time, be changed from one of treeless, grass-covered prairies and sand-dunes to an area of pine forests. It is a matter of much importance, therefore, to make a study of the avifauna there under existing conditions for comparison with those which will prevail when the hundreds of thousands of pines planted have become large enough to furnish food, shelter and nesting-places for birds.

In view of the facts that the open nature of the country makes it possible to discover, with comparative ease, the birds inhabiting it and, furthermore, that many of the observations herein recorded were obtained during the nesting season, Mr. Zimmer's paper, which lists 142 species, appears to supply just the kind of basis which will be useful in determining how the character of the bird-life may be affected by the radical change which will occur in the locality it covers.—F. M. C.

The Ornithological Magazines

THE AUK.—The April number opens with an article entitled 'Among the Birds of the Sudan,' by Mr. J. C. Phillips, who gives us a glimpse of bird-life along the Blue Nile, and illustrates his paper with a color-plate of a new Night-jar (*Caprimulgus eleanora*). Mr. Phillips also has notes elsewhere on the effect of cold storage on the molt. Mr. E. S. Cameron writes pleasantly of 'The Ferruginous Rough-leg (*Archibuteo ferrugineus*) in Montana,' and gives us also some fine pictures of birds and scenery. His anecdote of how a bird of this species picked up a cat by mistake for a rabbit is an excellent illustration of the present-day phrase 'reaction to stimuli.' An important contribution to economic ornithology is by Mr. H. C. Bryant on 'Birds as Destroyers of Grasshoppers in California,' wherein tables of figures and percentages are well worth the careful consideration of those interested.

Dr. R. M. Strong's paper, 'On the Habits and Behavior of the Herring Gull,' etc., is concluded. It might be called an

intensive study, which brings out many points of interest. There is a world of significance in the following quotation: "Just how much this behavior is tied up with instinctive activity is of course beyond knowledge." This, however is no reason for discouragement in the making of minute observations. Mr. A. A. Saunders seems to have succeeded well in 'An Ecological Study of the Breeding Birds of an Area near Chateau, Montana.' An exact census is hardly ever possible, but repeated counts are better than the repeated guesses of many local lists. It is pleasant, however, to find so excellent a list as that by Messrs. L. S. Golson and E. G. Holt, on 'Birds of Autauga and Montgomery Counties, Alabama.' The putting of three pictures on one plate has not given a happy result in this case.

Mr. V. Burtch certainly got a remarkable 'ghost' photograph of Holbell's Grebe, which he explains under the caption, 'Does a Grebe Spread its Wings Just before Diving.' Mr. H. W. Wright describes an unprecedented incursion of Acadian Chickadees into eastern Massachusetts in the fall of 1913, some seventy having been seen at many different places.

The General Notes are filled with unusual records too numerous to mention, and the department of Recent Literature, especially the reviews of items in the ornithological journals, is fully up to its high standard. The annual lists of members of the A. O. U. conclude the issue.—J. D., JR.

Book News

THE first fourteen volumes of BIRD-LORE recently sold for forty dollars, unbound, a sum nearly three times as large as that for which they were published.

THE Annual Report of the Director of the Department of Marine Zoölogy of the Carnegie Institution of Washington, for 1913, contains a list of 57 species of 'Birds Observed on the Florida Keys, April 25 to May 9, 1913,' by Paul Bartsch,

a note on the 'Homing Instinct in the Noddy and the Sooty Tern, which Nest upon Bird Key, Tortugas,' by John B. Watson and K. S. Lashley, and another upon 'Nesting Instincts of Noddy and Sooty Terns,' by K. S. Lashley.

In continuing his important experiments on the homing instinct of Noddies and Sooty Terns of Bird Key, Dr. Watson, among other tests, had six of the former and four of the latter released near the middle of the Gulf of Mexico, 515 miles from the Key. Of the ten, eight returned (three Noddies and five Sooties), the first one arriving three days and twenty-two hours after it was set free.

'Birds in the Bush,' the new department of 'The Guide to Nature,' conducted by Mr. E. J. Sawyer, is abundantly illustrated by its editor with drawings of birds, which shows them much as they appear in Nature. The plan is an admirable one, and so well executed that these drawings, aside from their attractiveness, should prove a help in identifying the birds they represent.

THE Department of Game and Fish of the State of Alabama issues an admirable Bird Day Book, the seventh of its series. It is prepared by John H. Wallace, Jr., the Game and Fish Commissioner, contains 88 pages and a number of illustrations, both colored and uncolored, forming a most attractive and useful publication.

If the manuals they issue may be considered an index, Alabama and Wisconsin may, we believe, claim to be far in the lead of other states in the attention they give to Bird Day.

THE Fifteenth Annual Report of the Michigan Academy of Science contains a paper (pp. 178-188) by N. A. Wood, on 'The Breeding Birds of the Charity Islands with Additional Notes on the Migrants.' From these Saginaw Bay islets 170 species of birds have now been recorded of which thirty-seven are known to breed.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

NEVER before has the interest in birds in this country been so widespread as it is today. Laws, both Federal and State are, as a whole, the best we have ever had, and they are more effectively enforced than at any previous time.

The educational work of the National Association of Audubon Societies, as its report shows, has been so successful that the Association has with difficulty met the demands made upon it.

Many plans are on foot for the establishment, in various parts of the country, for bird-refuges or sanctuaries, and for the systematic placing of nesting-houses and feeding-stations in parks and cemeteries. Owners of country places, small and large, are endeavoring in various ways to attract birds about their homes.

All that has been done in this direction we feel is only a beginning. We look forward to the day when birds will be considered as essential a part of country life as flowers are now; when the commoner species, at any rate, will be as generally known as are daisies and dandelions.

Then will man begin to realize on one of Nature's endowments, of which until recent years only the elect have availed themselves. Then will the potential value of birds to man become in greater measure actual.

That this day will come we have not the slightest doubt. The change in our attitude toward birds, and our gradual

awakening to the beauties of bird-life has been a perfectly normal response to a variety of causes all of which can be traced primarily to the influence of the American Ornithologists' Union, and to the Audubon movement which originated in the Union.

At present, in our opinion, the greatest single factor hastening this ornithological millennium is the formation of Junior classes by the National Association. The enrollment in a single season of nearly 100,000 children in definite courses of bird-study, and supplying them with the leaflets and colored plates of the Association is an accomplishment of untold importance. Nor does this figure convey a real idea of the far-reaching effects of the Association's labors. Next year it has been promised support to continue to develop this most productive field. At the present rate of increase, with adequate means, not many years will pass before one million children will have had some instruction concerning our common birds, and will have learned where they can get further information if they want it.

It is not to be expected that they all will want it. We can make bird-lovers far easier than we can make bird-students. Nor should we expect everyone who shows appreciation of the charm of the living bird to become an ornithologist. We have all heard of the person who hated botany and loved flowers; but that surely is no reason for discouraging a love of flowers.

So let us continue our work in making bird-lovers, with a hope that now and then we may rouse the latent spark which fires the ambition of the true ornithologist.

It is greatly to be hoped that Congress will make a large enough appropriation to insure the enforcement of the law designed to protect migratory birds. Although this law did not go into effect until October, 1913, the results of the protection it has afforded wild fowl are apparent in many places.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

HOW TO REACH TEACHERS AND PUPILS

A considerable number of our State Audubon Societies have worked out this problem in various practical ways; but since, from time to time, evidences come to this Department that the teachers and pupils of public schools are not in touch with the Audubon Societies of their particular states, it may not be out of place to suggest ways of promoting a closer relationship between them, at the risk of repeating what has previously been said on this subject.

To the novice, it might seem quite an easy task for any Audubon Society to reach all of the public as well as private schools of a single state, without undue expenditure of time or expense. It might also seem easy to such a person for every teacher of elementary grades to include some form of bird- or nature-study in the curriculum without great effort or thought. The experienced observer, however, knows that such points of view are oversanguine, and, at the present time, have their counterpart not in practice but in imagination. True, this ideal is exactly the one we all hope to see come to pass, but fitting the realities of any situation to an ideal, it goes without saying, "comes hard."

The difficulties of this particular situation are several. First: Not all Boards of Education favor the introduction of bird- and nature-study into our public schools or the assistance of any outside society, however worthy or well directed its work may be.

Second: Teachers are not equally well fitted, either by training, environment or by special aptitude, to take up nature-study successfully.

Third: The resources of the different State Audubon Societies are not uniform, and seldom are adequate to the demand made upon them.

The one really favorable and universally acknowledged condition in support of bird- and nature-study is that the children are eager for it, and a further argument might be added by stating a truth not always taken into consideration, namely, that some pupils are reached through this study who cannot be aroused to interest themselves in any other kind of prescribed work.

Admitting the difficulties which must be met at the start, is it not however, more than worth while to bring teachers and pupils everywhere into touch with a study so attractive, valuable, and full of possibilities as nature-study has been proven to be?

Audubon Societies that are going into this matter most efficiently are sending a paid worker or supervisor of nature-study throughout their states

to visit schools and personally assist teachers. After a canvass of this kind, public sentiment usually comes to the support of the work by favoring the introduction of nature-study into the schools as a part of the regular curriculum.

Societies which cannot yet afford this extensive kind of work need not wait for fortune to come their way, for the possibilities of working by post are great.

A yearly circular to teachers, containing information about the following points, ought not only to arouse much interest, but also to awaken confidence in the sincerity of the Audubon Society, and enthusiasm as to the possibilities of bird- and nature-study:

1. Traveling-libraries and traveling-pictures.
2. Instructions as to forming Junior Audubon Societies.
3. Demonstration material for loan purposes.
4. List of nature-books available in libraries of the state.
5. List of books and material available in museums of the state.
6. Lectures and lecturers, also meetings desirable to attend.
7. Exhibitions, fairs, conventions, or other general and public methods of illustrating nature-study from the point of view of horticulture, agriculture, etc.
8. List of excursions for short or long field-trips, with a definite schedule covering all details of the itinerary.
9. List of magazines, books and other publications, with addresses of publishers and cost stated.
10. List of national and international legislation of importance, and also of notable gatherings in the interest of bird- and nature-study, with short descriptions of the same.
11. Statement in brief of state game-laws and definite objects to work for, to improve these laws.
12. Invitation to report work done in nature-study to a central committee, with the double object of keeping in touch with the needs and accomplishment of each school, and of forming a bureau of exchange, which shall bring different schools in different parts of the state into friendly, competitive relations.

Other suggestions might be made, but the above are sufficient to test the *aliveness* of any Audubon Society. Such an annual bulletin might be well combined with a Bird and Arbor Day program, and should be sent to every school in the state and to as many teachers as possible. The very fact that the Audubon Society of any state has sufficient interest in teachers and pupils to prepare a comprehensive and entirely useful bulletin of up-to-date information each year would go a great way in furthering the cause of the birds and that of nature-study.

In order to make this Department of assistance in this matter, an invitation is herewith given to all Audubon Societies and to all teachers to send in suggestions which may be printed for the benefit of others.—A. H. W.

[NOTE.—The following letter, which was received after the above suggestions were written, is indicative of the interest that is felt by many educators in bird- and nature-study.—A. H. W.]

CONSERVATION OF OUR BIRDS

Dear Teachers: In our crowded curriculum of school subjects, I feel that we do not give enough attention to the study of our native birds. Considerable space is devoted to the subject of birds in our Common School Manual, viz., paragraphs 376 and 415 to 423 inclusive. A suggestion is made that birds should be studied all the year round, but I very seldom find any effective work done along that line.

Permit me to suggest that we devote special attention to birds this spring, teaching the value of birds, both from an esthetic standpoint and for their economic value.

Children should be taught to love birds for their beauty and song, and should be led to see the value of birds to farm life. The loss to the American farmer through weeds and insects runs into millions of dollars annually, and the most effective check on these is our birds.

Instill in the minds of our children a desire to protect, rather than destroy, the birds and their homes. Learn the names and habits of as many birds as possible. Now is a good time to get acquainted with our migratory birds, as they return from their winter quarters.

I would suggest that every school in the county have a Bird Day program this spring. For material, refer to the Bird Day annuals and library books on birds found in your school library, and write for information on birds and bird-study, from the following sources: United States Department of Agriculture, Washington, D. C., and our College of Agriculture; National Association of Audubon Societies; State Audubon Society, Madison, Wis.; Fish and Game Warden Department, Madison, Wis.; The Farm Journal Liberty Bell Bird Club, Washington Square, Philadelphia, Pa.; American Humane Education Society, 45 Milk St., Boston, Mass.; State Normal Schools, and other Colleges; Federal Inspector of Migratory Birds, Portage, Wis.

To perpetuate the work on bird-study, perhaps it might be well to organize an Audubon Society in your school. Please send us a copy of your Bird Day program.

Yours for kindness to birds,

H. A. AUNE, *County Superintendent.*

Baldwin, St. Croix Co., Wis., March 31, 1914.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XV: Correlated Studies, Manual Training, Arithmetic, English and Reading

THE LAW OF LIFE

James Russell Lowell voices so truly and so sincerely the feelings of the nature-lover that I am going to ask you to commence this exercise for May and June by re-reading the familiar prelude to "The Vision of Sir Launfal." Read it for the melody in it, the joyousness and deep-welling hope. One who loves Nature as an interpreter, as a teacher, or, best of all, as a child, cannot help

feeling that "the high tide of the year" is coming now, "flooding back with a ripply cheer" everything which has for months been bare and chill and dead.

By means of the keen senses and delicate imagination of the poet, we may come nearer to the heart of Nature, and may better understand why she has been called "*Mother Nature*." And let this thought of the motherhood of Nature be very clear in our minds as we go out into the fields among buttercups and cowslips and daisies, with life murmuring and glistening everywhere—"whether we look or whether we listen."



A GROUP OF BIRD-HOUSES MADE BY BOYS OF THE SIXTH, SEVENTH AND EIGHTH GRADES OF THE PUBLIC SCHOOLS OF NORWALK, OHIO, AT THE SUGGESTION OF THE FEDERATION OF WOMEN'S CLUBS.

We have seen many times before, perhaps, grass and trees and sky; but it is a beautiful thought and a wonderful one that "there's never a leaf or a blade too mean to be some happy creature's palace," and that over all "the warm ear of Heaven is softly laid!"

It is our pleasant task to find these palaces and their inmates, and to learn how Nature is the mother of all forms of life.

In preceding exercises, much has been said about the necessity of food, not only for birds but, also for all other living creatures. We have tried to discover some of the ways in which birds get food, as well as some of the places where they find it. But, if food-getting alone were the chief end of life, there would soon be no life at all upon the earth; because in a short span of years, months, or even days, any single creature must live out its allotted time and

die. Some other law must go with the law of food-getting and this, we find is the law of *reproduction*,—that is producing again creatures to take the place of those which die. This law is without doubt the most wonderful law we know of, and since reproduction is a long, cumbersome word, we may call it simply, the law of life.

Man has endeavored by his inventive skill, to duplicate some of the laws of Nature, as, for example, by means of the camera to *reproduce* a likeness of an



MANUAL TRAINING WORK

A few of the 143 Wren houses made by the boys in manual training classes. All of these houses were put up and *over half* have occupants.—H. P. Brown, Instructor, Berwyn, Ill. 1913.

object; but this is very far removed from the real law of life. A photograph, although a perfect and exact reproduction of its kind, has no power to make either another photograph or another object similar to the one of which it is a copy. In Nature, the law of life demands that each living creature be endowed with power to give life to another creature like itself.

You may pick up a seed carelessly, and toss it away without thought of what is packed so compactly and securely in its close-fitting coats; and yet that tiny seed contains something more wonderful and more lasting than an iron-clad warship, for it has the power to live and to grow and to leave other seeds possessed of life-giving power when it shall have gone through its own brief life-history. So, when you look at giant locomotives, at whirling spindles and looms, at ocean steamships, at air-ships, or any of the creatures of man's mechanism, remember that, powerful and remarkable as they are, they lack this one greatest endowment—the *germ of life*.

In May and June, the earth is full to overflowing with life. Everywhere we can find Nature, the great Earth-mother, offering not only food, but homes for shelter and cradles for offspring to the myriad creatures which abound throughout fields, streams, forests, and mountains.

We have already learned about some of the shelters and cradles of birds (see *Bird-Lore*, Vol. XV, No. 4, p. 253), but without particular reference to the law of life. Now we are to learn that only by means of this law can there be any birds here or anywhere. People are slowly coming to understand that, in spite of the great number of birds we seem to have, it takes only a short time to destroy them completely, to lose them forever from this earth of ours, through careless destruction during the mating- and nesting-season.

The greatest lesson we may learn in this exercise is that of the *value of life*. I cannot tell you what life is,—no one knows that,—but it is possible to learn something of the value of life, and the wonder of life and the joy of living.

These are the things to keep in mind as you go in search of flowers and birds and insects, and when once you begin to realize how every single living *organism* has a part all its own to perform, how it is necessary for it to do this work in Nature, then you will not need to be cautioned by your parents and teachers, or compelled by laws, to protect living creatures, instead of destroying them.

In order that you may gain some idea of the enormous amount of life which is around you and of which you are scarcely aware, I am going to ask you to work out a few sums in arithmetic about the food of nestling and adult birds, since this is the season of nesting with most of our migratory and permanent birds. The table below is compiled from figures which patient observers have tabulated, and represent many hours of careful watching and waiting, as you will believe, should you once try to discover the amount eaten by a single brood of young birds.

Sums Taken from a Table of the Capacity of Nestling Birds

1. If a single nestling Robin eats 60 earthworms in 1 day, how many worms would 6 nestlings eat in 10 days?
2. A brood of Long-billed Marsh Wrens have been known to eat 30 locusts in 1 hour. How many would they eat in a week, if they were fed from 6 A.M. to 6 P.M.?

3. A brood of House Wrens eat about 1,000 insects in 1 day. How many would be eaten in 1 hour, reckoning the feeding period from 5 A.M. to 6.30 P.M.?

4. The Purple Martin has been observed to feed its young 100 to 300 times a day. Reckoning from 4.30 A.M. to 7 P.M., how often would the young birds be fed?

Sums Taken from a Table of the Eating Capacity of Adult Birds

1. If 6 Robins eat 265 Rocky Mountain locusts at a single feeding, how many can 1 Robin eat?

2. 1 Nighthawk has been known to eat 500 mosquitos at a feeding. If it fed only three times a day, how many mosquitos would it eat in a week?

3. Two Scarlet Tanagers have been observed to eat 35 small gipsy moth caterpillars a minute, for 18 minutes. How many did they eat?

4. One Bobwhite ate 1,700 weed seeds at a feeding, while another ate 5,000 pigeon-grass seeds. How many feedings would it take to destroy 50,000 of these weed seeds?



A section of the Junior Audubon class, taken just previous to locating bird-boxes in April. During the summer we took many morning tramps and made the acquaintance of a number of our bird friends.—Mrs. Cora D. Berlin, Wimbledon, North Dakota.

See "A Bird-Study Class in North Dakota," BIRD-LORE, Vol. XVI, No. 2, p. 135.

Large as these figures seem, they show but a fraction of the ceaseless activity of life around us. There are not figures enough to denote the countless numbers of insects which are devouring equally countless numbers of plants and other forms of vegetable life. Looking at the clear, still air above us, or the ceaselessly moving ocean which is ever beyond us, we cannot even imagine the life which is contained in them. There is no part of nature-study more delightful than simply finding out *living things*. The kinds of life, the amazing variety

of these kinds, their habits and history. No fairy-tale can equal this story of Nature.

It has been the joy of very many people to go out and study nature each spring, particularly when life is at its height. Bird-lovers keep lists of the different kinds of birds which they see, and welcome each new arrival as a returning friend. Plant-lovers hunt for the first violet, and the pure white bloodroot, lingering long in favored nooks and dells to discover shy blossoms.

Insect-lovers need do no more than search here and there, wherever they may happen to be, to find all kinds of treasures. The impossibility of ever becoming acquainted with all the different kinds of insects only adds to the charm of the study.

The following list of birds seen by a boy fifteen years old, during a single year, in the neighborhood of his home, shows the variety of feathered life which may be found in a very limited area, provided the observer is a real nature-lover who knows the haunts of wild creatures and how and where to look.

[NOTE.—The following list was seen during 1912 by Charles O. Handley, at Lewisburg, W. Va., in a country 2,100 feet above sea-level. This boy kept a lunch-counter for birds in winter, and put up nesting-boxes for them at the proper time.]

Lesser Scaup Duck	Yellow-bellied Sapsucker	Savannah Sparrow
Least Bittern	Pileated Woodpecker	Grasshopper Sparrow
Sandhill Crane	Red-headed Woodpecker	White-crowned Sparrow
Wilson Snipe	Flicker	White-throated Sparrow
Greater Yellow-Legs	Nighthawk	Tree Sparrow
Lesser Yellow-Legs	Chimney Swift	Chipping Sparrow
Solitary Sandpiper	Ruby-throated Humming-	Field Sparrow
Bartramian Sandpiper	bird	Slate-colored Junco
Spotted Sandpiper	Kingbird	Song Sparrow
Killdeer	Crested Flycatcher	Swamp Sparrow
Bob-white	Phoebe	Fox Sparrow
Ruffed Grouse	Wood Pewee	Towhee
Mourning Dove	Red-bellied Woodpecker	Cardinal
Turkey Vulture	Least Flycatcher	Rose-breasted Grosbeak
Marsh Hawk	Prairie Horned Lark	Indigo Bunting
Sharp-shinned Hawk	Blue Jay	Scarlet Tanager
Cooper's Hawk	Crow	Purple Martin
Red-tailed Hawk	Bobolink	Cliff Swallow
Bald Eagle	Cowbird	Barn Swallow
Sparrow Hawk	Red-winged Blackbird	Cedar Waxwing
American Osprey	Meadowlark	Red-eyed Vireo
Screech Owl	Orchard Oriole	Yellow-throated Vireo
Great Horned Owl	Baltimore Oriole	Blue-headed Vireo
Yellow-billed Cuckoo	Rusty Blackbird	Black and White Warbler
Black-billed Cuckoo	Purple Grackle	Worm-eating Warbler
Belted Kingfisher	Goldfinch	Golden-winged Warbler
Hairy Woodpecker	English Sparrow	Nashville Warbler
Downy Woodpecker	Vesper Sparrow	Tennessee Warbler

Parula Warbler	Maryland Yellow-throat	Red-breasted Nuthatch
Cape May Warbler	Yellow-breasted Chat	Tufted Titmouse
Yellow Warbler	Hooded Warbler	Black-capped Chickadee
Black-throated Blue Warbler	Wilson Warbler	Golden-crowned Kinglet
Myrtle Warbler	Canadian Warbler	Ruby-crowned Kinglet
Bay-breasted Warbler	Redstart	Blue-gray Gnatcatcher
Blackburnian Warbler	Mockingbird	Wood Thrush
Black-poll Warbler	Catbird	Olive-backed Thrush
Palm Warbler	Brown Thrasher	Hermit Thrush
Oven-bird	Carolina Wren	Robin
Water-Thrush	House Wren	Bluebird
Black-throated Green Warbler	Winter Wren	Whip-poor-will and Chestnut-sided Warblers heard but not seen.
	Brown Creeper	
	White-breasted Nuthatch	

This list represents the kind of bird-work which hundreds of people are doing, for their own pleasure and profit. It is a good kind of work to do, but may be bettered in one way, namely, by working in connection with others.

For example, if the bird-lovers in each town, city or village would put their lists together and combine them with the lists of other observers all over their state, these state-lists could be put into the hands of an expert, who would be able to gather considerable valuable data from them, which he, in turn, might send to the head of the Bird-migration Bureau, Prof. Wells W. Cooke, at Washington, D. C.

Our schools would do best to get information about the birds which are now given each month in BIRD-LORE; for definite data about a few well-known species is worth far more than indefinite data about many doubtful species. By learning how to get together a few facts each year about any single species of bird, plant, insect, or other organism, one may become trained to look for the essential and important facts of life, instead of groping around, in a maze, without any clue to the meaning of what is seen and heard.

In bird-study, as in everything else, a few things well done count for more than many things half done.

To sum up this exercise in a few lines: There are two great laws which control every organism, namely, food-getting (*nutrition*), and life-giving (*reproduction*); the variety of living forms is everywhere apparent; the value of life may be learned, but what life is no one yet knows; in studying life, *have a method*, whatever the forms studied, and finally whenever possible coöperate with others, at least in bird-study.

SUGGESTIONS

1. Why do poets use adjectives so much more truly than the average person? Is it because they see things more correctly? Notice the adjectives in selection from Lowell.
2. How many kinds of flowers, birds, insects, trees, fishes and other living forms do you know? Make a list of them.
3. In how many different ways are nests made by birds?

4. What creatures besides birds make nests?
5. How early do you hear birds in the morning? How late in the evening?
6. Which birds sing first in the morning and last at night?
7. Do birds ever sing during the night?
8. Are soft-bodied or hard-bodied insects fed to nestling birds? Why?
9. Do nestling birds get any water to drink?
10. How are the nests of birds protected from heat, rain and wind?
11. How does the nest of the English Sparrow compare with that of other birds?
12. Do birds of a kind always build the same kind of nest?
13. How would you go to work to construct a Robin's nest? a Chipping Sparrow's?
a Woodpecker's? a Chimney Swift's?
14. Where and how would you place a nest to make it secure?

References: Nestlings of Forest and Marsh, by Irene G. Wheelock; The Home Life of Wild Birds, by W. H. Herrick; Food of the Bobwhite, by Margaret M. Nice; Journal of Economic Entomology, Vol. 3, No. 3, 1910; The Food of Nestling Birds, by Sylvester D. Judd, Yearbook of U. S. Dept. of Agriculture, 1900; Birds' Nests and Eggs, by F. M. Chapman, Guide Leaflet No. 14, Supplement to American Museum Journal, Vol. IV, No. 2; The Nature-Study Review; Field and School Bird Note-Book, No. 1 by Anna B. Comstock.—A. H. W.

FROM ADULT AND YOUNG OBSERVERS

A NEST IN A NEST

A large hornets' nest, measuring about four feet in length and two feet across its greatest width, hung as a much-admired trophy on the front porch of a country home in Middle Tennessee. A pair of Wrens chose it as the place for their home, and were soon busy making it to their liking.

They chose an opening in the upper side of the huge hornets' nest, and there fashioned their own snug little nest.

The four little boys living in the country home enjoyed to the utmost watching the busy little birds.

The nest hung within three feet of the front door of the dwelling, but the frequent passing in and out of the door did not seem to disturb the birds in the least. Soon seven eggs were in the nest.

How impatient the four boys became, waiting for the baby birds to break the shell! At last the day came when the cry of seven little hungry Wrens was heard.

Then the old birds were very busy feeding the little Wrens until they were strong enough to fly away from their "nest in a nest."—HILDA THOMA, *Tulahoma, Tenn.*

[An unusual observation, showing the adaptability of birds in the selection of nesting-sites. Since Wrens raise two and three broods in a season, it would be interesting to know whether the hornet's nest sheltered more than one brood.—A. H. W.]

THE BLUEBIRD

I saw a Bluebird near the sandheap in the apple tree. He had his nest in our apple tree. He had a blue back. He had a blue side. He eats seeds. We throw crumbs of bread out to the birds. I always watch for the birds. I watch for the Bluebirds in the spring. The Bluebird has a red-brown breast.—ANGIE ABEL (Grade II, age 8).

[The habit of watching for the birds in the spring and for the blossoming of plants and hatching of insects is a fine habit to form. "Study Nature, not books," was the favorite advice of one great teacher of Nature.—A. H. W.]

THE BOBOLINK

I am a member of the Junior Branch of the Audubon Society of Connecticut. I live in Redding.

The Orchard Oriole is commonly called the Bobolink throughout the countries it inhabits. Its plumage varies with age and sex. It is often confounded with other species. Its nest is a wonderful structure, woven strongly of grasses into a purse-like shape, and it looks as though it was spun on a loom.

This bird is the true friend of the farmer, for it destroys the destructive bugs which infest the fruit trees.

Since I have joined the bird club I have tried to find out the habits of birds, and have fed them until they have become tame and come every morning for food.—JOHN CARROLL, (aged 12). *Redding, Conn.*

THE CHICKADEE

I am a member of the Junior Audubon Society of the Connecticut branch. I have chosen the Chickadee to write about.

The Chickadee's song is heard in the woodland fields. The Chickadee starts with a human voice and calls its own name, "Chickadee," Chick-a-dee-dee-dee-dee, then starts all over again.

The Chickadee is fond of meat scraps that some kind boy or girl has tied to a limb of a tree where they have seen the Chickadee perch.

One day in February, when the ground was covered with snow, I took some scraps of meat and tied them to a cherry tree. One day afterward I saw a Chickadee on the under side of the meat. It got a good mouthful and flew away. It became so tame that it flew in the woodhouse door and flew against the window, but I caught it and set it free. I joined the Bird Society when I was twelve years of age.—R. RYDER (aged 12), *Redding, Conn.*

[These two entertaining letters show the value of our Junior Audubon organization. It might be well to notice that the Orchard Oriole and Bobolink are two quite different species. Although both are fine songsters, and the male and female of each are unlike in coloration, the nesting- and feeding- habits and flight of the two are entirely distinct.—A. H. W.]

HOW TO STUDY BIRDS

When you see a bird, watch what he is doing, and his particular markings. Get as close as you can, to be sure how large he is; notice what he is eating.

I have a bird-house. It has five rooms. When you make a bird-house, you must have plenty of air in it for the mother bird. When you want a House Wren to build, he must have a little hole to fit him about an inch high. He can drive the Sparrow and the Bluebird away. He is a saucy little fellow. He is quick and sly. One year we put a box in a tree. The Bluebird built his nest in it first. The eggs were about to hatch. Then the Wren came and took possession of the house. Then the Bluebird went away. The Wren went and brought his wife. They threw the eggs and hay out of the box. They put in new. Then more eggs were laid. The young hatched. They were fed spider's eggs. When they were quite large they came up to the hole to get their meals. We put another box up. The father bird built another nest in it. Then the mother bird laid eight white eggs. The family of birds came out and went off to the woods, then came back. In a few weeks the birds hatched. I could not go to school without seeing birds.—DAVID PRUDDEN (Grade V, age 12).

[The closing sentence of this letter has a message for everyone. When one is wide-awake to the outside world, the trees and shrubs and roadsides are alive with birds and life of all kinds, and going to school becomes a journey of discovery instead of a tiresome compulsory walk.—A. H. W.]

THE FLYCATCHER CLASS

The Flycatcher bird is a lively bird,
And a way of his own hath he,
To perch perchance on a weed or a post
Or the outer branch of a tree.

On seeing one, he's off like a flash,
For a capture quick, and then,
With easy, dancing flight, returns
To his chosen perch again.

There, turning his head from side to side,
He looks with an eager eye,
Above, below, and all around,
For insects as they fly.

Oh, the Flycatcher birds are lively birds,
And sportsmen every one,
They always take their game on 'the wing,
Without the noise of a gun.

—By permission of DR. GARRETT NEWKIRK.

THE ROSEATE SPOONBILL

By FRANK M. CHAPMAN

The National Association of Audubon Societies

EDUCATIONAL LEAFLET No. 74

In 1858, when Dr. Henry Bryant visited Pelican Island, on Indian River, he found not only Brown Pelicans, but also Roseate Spoonbills nesting there. But even at that early date these beautiful and interesting birds were prey for the plumer, some of whom, Dr. Bryant writes, were killing as many as 60 Spoonbills a day, and sending their wings to St. Augustine to be sold as fans!

From that time almost to this, 'Pink Curlews,' as the Floridan calls them, have been a mark for every man with a gun. Only a remnant was left when the National Association of Audubon Societies protested against the further wanton destruction of bird-life, and through its wardens and by the establishment of reservations, attempted to do for Florida what the state had not enough foresight to do for itself.

In consequence, the Spoonbill and other birds, have been saved, to delight future generations of nature lovers. Warden Kroegel, of Pelican Island, tells me that, in June, 1913, he saw a flock of 60 on the Mosquito Inlet Reservation, and the day I pen these lines word comes from President Blackman of the Florida Audubon Society, that he had seen 50 Spoonbills on Bird Island, on the Gulf coast. So let us hope that what I have to write here relates not to a species approaching extinction, but to one which, under proper guardianship, is increasing and will continue to increase.

The Roseate Spoonbill belongs to one of those families of birds which, like Ibises, Parrots, Trogons, and many others, are distributed throughout the warmer parts of the earth. Thus there are European, African, Asian, and Australian Spoonbills, none pink like ours, but all with the singularly shaped bill which gives them their common name. There are only six members in this small family; and how they should have become so widely separated is a question no one has answered satisfactorily. It is, however, known that, at one time in the earth's history, what are now Arctic regions were very much warmer, and it is not improbable that at this period Spoonbills may have lived on the border of the Arctic Sea. When the climate changed and the ice of the Glacial Periods formed, Spoonbills, with other birds, were forced southward, and hence, although we find them today at far distant parts of the globe, they at one time may have lived much nearer together.

Of the six known species America received but one, the Roseate Spoonbill, whose peculiar scientific title of *Ajaia ajaja* is based on the name given it by certain South American Indians. When naturalists first knew this bird



ROSEATE SPOONBILL

ORDER—Herodiones
GENUS—Ajaia

FAMILY—Plataleidae
SPECIES—Ajaia

it was found throughout tropical America north to our Gulf States from Texas to Florida. In the United States, it is now confined largely to south Florida, where, as I have already said, it was fast approaching extinction when the Audubon Societies came to its rescue.

Although I first went to Florida in 1887, it was not until 1908 that I saw Spoonbills there. Doubtless always more common on the coast than in the interior, the few survivors were to be found only in the most remote part of the great mangrove swamps south of the Everglades. On the evening of March 29, 1908, after traveling all day through mud and mangroves, we reached Cuthbert Rookery, near the extreme southern part of the peninsula, and found, to our intense satisfaction, that among the thousands of Herons nesting on it there were about 40 Spoonbills.

The beautiful peach-bloom-like pink of the Spoonbills was noticeable at a great distance. In manner of flight they resemble Ibises rather than Herons, the neck being fully extended. The flock formation is also like that at times assumed by the Ibis, each bird flying behind, but a little to one side, of the bird before it, a number, therefore, making a diagonal file. Spoonbills, however, so far as I have observed, maintain a steady flapping of the wings, uninterrupted by short sails, as in the case of the Ibis.

The Spoonbill's peculiarly shaped bill is adapted to an equally peculiar method of procuring food. I have never seen one of these birds in nature feeding nearby, but Audubon tells us that they "wade up to the tibia, and immerse their bills in the water or soft mud, sometimes with the head and even whole neck beneath the surface. . . . They move their partially opened mandibles laterally to and fro with considerable degree of elegance, munching the fry, insects or small fish which they secure, before swallowing them."

Audubon says nothing of the voice of the Spoonbill. At Cuthbert Rookery I heard no notes I could identify as theirs, but two years later, in Mexico, I heard them utter a low, croaking call at their nests.

Fear in animals is so often born of pursuit by man that it is often difficult to say whether birds which have been much hunted are shy instinctively or intelligently. Wild Ducks, we know, are as wary as birds can well be where they are shot, but surprisingly tame where they are protected and fed.

I have seen White Egrets roost nightly near a hacienda in Cuba where they had learned they were safe, but those in Cuthbert Rookery were startled into sudden flight by the report of a gun fired at a distance of a mile and a half.

If, therefore, Spoonbills could be made to realize that man was their friend rather than their enemy, they, too, might learn to trust him. But, unfortunately, their experience with the human race has developed anything but love of it.

Although the Spoonbills in Cuthbert Rookery had nests with eggs, they

deserted them as soon as we entered the rookery. An umbrella blind was placed in one of the larger mangrove bushes, but after hours of waiting, no Spoonbills were seen. At sunset the birds of various species began to return to the rookery for the night. Flock after flock of White Ibises, with bright red feet and faces, came to roost in favorite trees. With much talking Louisiana Herons greeted birds that had evidently been absent during the day. Turkey Vultures silently sailed in to perch in rows on the branches of a dead tree, and, suddenly, six Spoonbills, with a resonant *woof-woof-woof* of beating wings, lit in my foreground. One of them was within fifteen feet of me. As it grew darker the birds became more numerous, pouring into the rookery from every side, and as they settled for the night and disputed the possession of some perch with their neighbors, there arose a veritable babel of voices.

Their keen sight dimmed by the gloom, the birds were now less shy. A Louisiana Heron sought what was doubtless his regularly frequented perch within reach of my foot, others took adjoining limbs, and, as the crowning event of the afternoon, a Spoonbill and two Snowy Egrets roosted in the same tree with me.

There were about a dozen Spoonbills' nests in this rookery, four or five of which held fresh eggs. In one there were four, in the others, three eggs. The nests were in the mangroves often near one another, and at an average height of ten to twelve feet. They were made of larger sticks than those used by the American Egrets which were nesting near them. As a rule the sticks were rather loosely put together and the nests were far from carefully made.

Spoonbills' eggs, like their habits and structure, indicate that they are more nearly related to the Ibises than to the Herons. Instead of being blue like those of Herons, they are white or pale greenish blue, more or less heavily blotched with brown at the larger end, and with spots or specks scattered over the remaining surface. Thus, they resemble the eggs of the White Ibis. They measure about two and a half inches in length and one and three-quarters in breadth.

The eggs we found in Cuthbert Rookery on March 29 were freshly laid, but we had reason to believe that the birds had been robbed and that this was a second laying. Audubon says that the eggs are laid about the middle of April, but there are specimens in the United States National Museum which were secured on Marquesas Key, Florida, January 11, 1883. Unquestionably, therefore, the birds begin to nest as early as January. Later dates may be, as with the Cuthbert Rookery birds, second layings, or due to the variation in nesting-time which sometimes occurs among birds breeding in warmer climates, where the necessity for regularity is not so urgent as it is further north where the warm season is shorter.

- On April 17, 1910, I found a colony of about 200 pairs of Roseate Spoonbills on Pajaro Island, in Tamiahua Lagoon, on the Gulf Coast of Mexico,

south of Tampico. Most of the nests contained well-grown young at least a month old, and probably older. Allowing a month for hatching, and it is evident that these birds begin to lay about the middle of February.

Shortly after birth, Spoonbills are covered with a snowy white down, through which one can see enough of their pink skin to give them a pinkish appearance. The feathers, however, are not colored. While they are in the nest, this plumage, 'natal down' as it is called, is followed by what is known as the 'juvenal plumage' in which they leave the nest.

In general appearance they now strongly resemble their parents; but the head and throat are thinly covered with white feathers, and the rusty marks at the sides of the breast and end of the tail of the adult are replaced by pink.

In the Mexican colony, four was the usual number of young. They were well-behaved youngsters and, in the absence of their parents, rested peacefully in their homes, or occasionally ventured on thrilling excursions of a few feet to the adjoining limbs.

But, when their parents returned, they were all attention and on the alert for food. At such times they usually stood in a row on the edge of the nest facing the old birds, and in a most comical manner swung the head and neck up and down. I have seen balanced mechanical toys which would make almost exactly the same motion. The toys, however, were silent, while the little Spoonbills all joined in a chorus of tremulous, trilling whistles, which grew louder and more rapid as the parent approached.

What their parents brought them I could not see, nor, for that matter, could they. But, with a confidence born of experience, the bird that had the first opportunity pushed its bill and head far down its parent's bill to get whatever was there. This singular operation sometimes lasted as long as ten seconds, and it was terminated only by the parent which, much against the will of its offspring, disengaged itself; then, after a short rest, a second youngster was fed, and thus in due time the whole family was satisfied.

The young now sank contentedly back in the nest, and the old ones stood quietly by, or went back to the shores and marshes for further supplies.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

WILLIAM DUTCHER, *President*
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Any person, club, school or company in sympathy with the objects of this Association may become a member, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5.00 annually pays for a Sustaining Membership
\$100.00 paid at one time constitutes a Life Membership
\$1,000.00 constitutes a person a Patron
\$5,000.00 constitutes a person a Founder
\$25,000.00 constitutes a person a Benefactor

GLORIOUS RESULTS FROM THE JUNIOR CAMPAIGN



A Junior Architect, of Plainfield, New Jersey

BEYOND doubt, nothing is so great a problem, or one whose solution is so important to the future prosperity and peace of the country, as the rescue of the children of the land from evil influences, and the diversion of their restless

activity and curiosity into safe and beneficent channels. To do this their interest must be excited in something which will appeal to their minds as amusing, and at the same time really worth while.

The pursuit of the study of natural history offers just these attractions, and to a large extent appeals to girls as well as to boys. No better place to begin this study exists than in watching the activities of birds, which invite the interest of all children by their pretty ways, sweet voices, and domestic habits. In respect to no other class of animals is sentiment so mingled with science as here; and, when one needs to cultivate in a young mind a sense of the duty of consideration for

animals, the bird offers the best possible point of beginning.

These thoughts would rise first to the mind of the moralist and social economist as he looked at the astounding success of the Junior Audubon movement displayed by the statistics published in these pages,—and mayhap that is really the important thing that has been accomplished. It may be that these tens of thousands of children, poring over their leaflets, memorizing the various birds pictured while happily reproducing their portraits with their crayons, and exercising their ingenuity in pleasant rivalry as they contrive their bird-lodges and set them in cautiously chosen places, are acquiring, quite unknowingly, powers and qualities that will be of far greater value to them in the future than will their store of ornithology.

But for us in the National Association such training is a by-product, very welcome, but not the main subject for congratulation. Our wonder and joy are excited by the fact that all over our broad land groups of children have had their point of view completely changed in respect to the world of life. A bird, or a squirrel, or a butterfly, is no longer to their eyes merely a thing which arouses the barbaric instinct of capture, but a

being with distinct and interesting characteristics, qualities, and relations to us and the rest of the world—an object from which something may be learned, and which must not be wantonly sacrificed. With the growth of interest, there naturally arises a sense of care; and bird-lovers are inevitably bird-protectors.

That this is the real significance of 'bird-study' in the schools, is plain from the letters printed elsewhere in this number. None of these letters was written for publication, but each gives the simple annals of a little club here and there, many

of whose
bright faces
smile at us



BUILDERS

from these pages, and each shows that the work that little club is doing is a very important if not a conspicuous element in the education of every member.

As a matter of fact, bird-study is every day coming to be a more pronounced factor in the instruction given to children in the public and private schools of this country.

The plan of supplying pupils with two Educational Leaflets, colored plates, and outline drawings of birds, and an Audubon button, all for ten cents, was first offered to children in the Southern States in the autumn of 1910, when Mrs. Russell Sage gave the Association \$5,000 for educational work in bird-study in that region. Mrs. Sage was particularly interested in the protection of the Robin; and the Association felt that in no better way could a part of the fund be expended than in instructing the children of the South on the beauty of bird-study and the value of bird-protection. Hence, it was arranged to give the children this carefully pre-

pared material at half, or less than half, the actual cost of printing and handling.

By the end of the school-year, in 1911, 533 Junior Classes had been formed, with a total paid membership of 10,595.

Mrs. Sage has continued to contribute each year a sum equal to her first gift, and the work has gone steadily forward. In 1912, 10,004 children were enrolled; in 1913, 12,815; and within the present year, up to May 1, the number of Junior members who have received systematic instruction in bird-study is 17,947.

At the annual meeting of the National Association in October, 1911, one of the members who was present and heard of this work became impressed with the

desirability of extending similar benefits to the children of the Northern and Western States.



OF A BIRD-HOUSE

He therefore proceeded to arrange for a fund of \$5,000,

to pay the expense of the proposed experiment. The office-force of the Association was at once increased, and the plan presented to northern and western teachers. The results were even better than in the South, for, when the schools closed in June, 1912, it was found that 19,365 Juniors had been enrolled. For the work the next year this good patron of the children increased his gift to \$7,000, and 40,342 Juniors were added to the ranks. During the past year this same interested friend has provided \$12,000 for this work, and the total number of Juniors enrolled this year, up to May 1, is 79,823.

Statistics of Junior Classes and their members, from June 15, 1913, to May 1, 1914, arranged by states, North and South, follows on page 221.



TOWN



FIRST PRIZE.—THE JUNIOR AUDUBON CLASS OF ALBANY, INDIANA

SOUTHERN STATES (MRS. RUSSELL SAGE FUND)			
<i>Summary ending May 1, 1914.</i>			
States	Classes	Members	1913. Members
Alabama.....	29	461	203
Arkansas.....	8	113	99
District of Co- lumbia.....	5	91	
Florida.....	162	3,426	2,202
Georgia.....	66	1,151	763
Kentucky.....	66	1,414	1,081
Louisiana.....	24	424	124
Maryland.....	113	2,270	344
Mississippi.....	37	646	269
North Carolina..	54	889	607
Panama.....	1	31	92
South Carolina..	33	431	168
Tennessee.....	77	1,501	2,027
Texas.....	46	872	646
Virginia.....	155	2,252	1,647
West Virginia... 97		1,975	1,338
Totals.....	973	17,947	11,610

NORTHERN STATES (CHILDREN'S EDUCATIONAL FUND)			
<i>Summary ending May 1, 1914.</i>			
States	Classes	Members	1913. Members
Arizona.....	1	16	
California.....	45	915	136
Canada.....	154	2,586	249
Colorado.....	25	418	245
Connecticut....	83	1,666	606
Idaho.....	10	160	28
Delaware.....	6	64	
Carried forw'd.	324	5,825	1,264

States	Classes	Members	Members
Brought forw'd	324	5,825	1,264
Illinois.....	358	6,274	2,524
Indiana.....	110	1,934	2,049
Iowa.....	155	2,755	905
Kansas.....	26	406	143
Maine.....	51	834	225
Massachusetts..	268	6,508	2,668
Michigan.....	499	8,852	2,881
Minnesota.....	194	3,434	1,856
Missouri.....	74	1,290	782
Montana.....	46	689	20
Nebraska.....	30	346	237
Nevada.....	27	435	132
New Hampshire	32	544	518
New Jersey....	406	8,566	7,695
New Mexico....	21	361	136
New York.....	721	12,901	957
North Dakota..	24	514	277
Ohio.....	291	5,923	4,634
Oklahoma.....	38	573	
Oregon.....	41	717	77
Pennsylvania..	302	5,774	1,666
Rhode Island..	36	595	1,730
South Dakota..	59	813	91
Utah.....	6	129	20
Vermont.....	33	636	158
Washington....	56	835	207
Wisconsin.....	101	1,019	2,172
Wyoming.....	19	341	91
Totals.....	4,348	79,823	36,715

The grand totals for the whole country are: 5,311 classes, with 97,770 members on May 1, 1914, as compared with 48,325 members enrolled up to May 1, 1913—one year ago.

REACTION IN CALIFORNIA

A concerted and strenuous effort is being made by the market-hunters and game-dealers of California to invoke the initiative at the election next November, for the purpose of changing the existing game-law so as to permit marketing of game under "restrictions" which look beautiful on paper but will stand little in the way of the greed of gunners and dealers. They are using every means ingenuity suggests to gain votes for the change, shouting the old argument that the game belongs to the people, and that preservation, and the restrictions of the present excellent law, are made wholly in favor of rich men and "swell sportsmen." The fallacy in the logic of this argument is completely ignored; as is the lesson of experience, everywhere, that "the

people" will not take care of the game that is alleged to be theirs, but will let it be wasted by the few whose interest it is to destroy it as fast as possible, regardless of what may come after their time.

Against this onslaught upon law and order in game-protective matters the California Fish, Game, and Forest Protective League is making a sturdy fight. It has something worth fighting for. "The sale of game in this State during the Exposition year," it is declared by Harry Harper, the spokesman of the League, "will put five thousand market-hunters in the field, and will . . . place a bounty upon virtually every living game-object that swims, walks or flies."

The National Association trusts local resistance will succeed.



SECOND PRIZE.—THE JUNIOR CLASS AT SUTTON, WEST VIRGINIA

THE JUNIOR COMPETITION

AWARD OF PRIZES TO SUCCESSFUL CLUBS

Early in the spring, the Secretary of the National Association sent out to all teachers and leaders of Junior Audubon Classes the circular letter quoted below:

"Will you not send us a brief, concise letter of just what you have been able to do, and what you think of this plan of work? The result of your efforts will be interesting to other people, and will probably encourage our friends to continue to make contributions for this special work in future. Can you send me a photograph of your class? You might arrange the children to show them tying suet and crumbs to limbs, or scattering seed on the ground for the birds. If any of the children are making bird-boxes, let them hold these up on the picture."

"For the teacher sending in the most interesting photograph of her class, and a brief account of the work done, we will give a prize of \$10. The two next best will each receive Chapman's 'Handbook of Birds of Eastern North America,' and to each of the seven next best, we will give a copy of 'Reed's Guide.'"

The result of this appeal was the receipt of a large quantity of photographs and many letters detailing methods and accomplishments, from which a selection of winners has been made, as follows:

List of Prize-Winners

First Prize.—Albany Junior Audubon Class, Albany, Indiana. Miss Edna Stafford, Teacher.

Second Prize.—Sutton Junior Audubon Class, Sutton, West Virginia. Miss Ida S. Given, Teacher.

Third Prize.—Stevenson School Junior Audubon Class, New York City. Miss Ida Ullrich, Teacher.

Fourth Prize.—Wm. McGuffey Audubon Class, Oxford, Ohio. Miss Anna E. Wilson, Teacher.

Fifth Prize.—Ashland Junior Audubon Class, Ashland, Ohio. Ralph D. Richards, Teacher.

Sixth Prize.—Albuquerque Junior Audubon Class, Albuquerque, New Mexico. Miss E. Mrytle Plant, Teacher.

Seventh Prize.—Mississippi Agricultural Model School Junior Audubon Class. Miss Ada Joyce Foster, Teacher.

Eighth Prize.—Fourth-Grade Junior Audubon Class, Manchester-by-the-Sea, Massachusetts. Miss Eliza G. Goldsmith, Teacher.

Ninth Prize.—Second-Grade Junior Audubon Class, Cedar Rapids, Iowa. Miss Marie Kugler, Teacher.

Tenth Prize.—Fifth-Grade Junior Audubon Class, Chagrin Falls, Ohio.

The photographs awarded the first and the second prizes, and some of the others in the list, will be found reproduced in the present number. The others have been reserved for future publication. Of the essays sent in, several will be found printed in this number, in whole or in part, and will furnish many helpful suggestions to other workers in this broad and fertile field, whose cultivation is not yet fully understood. The letters show that thousands of bright little minds are busy in bird-study; but they show also that bright minds among the teachers are earnestly solving the problems that rise in conducting these eager Juniors.

The National Association of Audubon Societies offers its sincere thanks and compliments to all who have so promptly responded to its circular of invitation.



LOOKING UP A SUBJECT, AT SOUTH WINDHAM, MAINE



THE "AUDUBON CORNER" OF A RALEIGH SCHOOL-ROOM

LETTERS FROM JUNIOR CLASSES

From the Prize-Winning Club

The first prize for a class photograph was awarded to the Junior Class of Albany, Indiana, and is reproduced on page 220. The leader of this fine class is Miss Edna Stafford, who sketches its origin and progress in the pleasant paragraphs quoted below:

"One day last summer a twelve-year-old boy was out on our street with an air-gun, thoughtlessly shooting at every bird he could see. Recently the same boy came to me with a bird which had been hurt, and in the most sympathetic tones said: 'Who do you suppose could have been so cruel as to hurt this dear little bird? What can we do for it?'

"Our study of birds in the Junior Audubon Society brought about this change in the boy. It has greatly interested the boys and girls, especially in respect to the protection of the birds. The boys are out very early each morning, watching and following the birds.

"We spend one hour each week in

studying birds. Each one in the class is making a bird note-book. Our first lesson was a study on the life of John James Audubon. We next made a list of the birds that remained with us during the winter, noting their food and what we could do to help them. We then studied the usefulness of birds, and made a study of the ways by which we might attract the most useful to our homes. Of course, the building of bird-boxes came next. We were getting ready to receive our summer guests. It was requested that our bird-boxes should be in our picture, so I spoke of it to the class; but to my surprise the boys refused, although they had been so proud of them. But listen to their reasons. The boxes had already been put up, and some said, 'Oh we cannot take our boxes down, for the birds have begun to build in them,' while others said, 'I am sure the birds have our boxes placed, and it would never do to take them down.'

"But they were willing to build more.

"So in our picture you see them at work: and there can be no doubt that they are enjoying it."

The second prize picture (page 222) is that of the Junior Audubon Class at Sutton, West Virginia, Miss Ida S. Gieven, teacher. The picture gives a good illustration of the pride taken in these clubs everywhere by their youthful members.

Suggestions from the South

Next comes an interesting letter from the South, showing how teachers in Raleigh, North Carolina, foster the movement in their schools; the writer is Miss Mary W. Quinn, of Thompson School, who has charge of the fifth-grade Juniors depicted on this page.

"The Junior Audubon Society of Thompson School was organized in the fifth grade in January, 1914. Since that time we have had meetings fortnightly, studying the literature supplied by the National Association. At each meeting a story or poem about birds was used.

"In our spring drawing-lessons, and in our language-work, we have used the

Audubon leaflets and colored plates. The children found this very interesting, and never failed to write good stories. It seemed to put new life and interest into our work. We have had a most interesting visit to the State Museum to study the birds there, as to form, color, etc.; and on pleasant days we have made some delightful trips into the woods. One boy has mounted some birds given him at the museum, and we have added these to the Audubon corner of our school-room. Our collection includes birds' nests of last year, cocoons, bird-maps and pictures. The boys at present are building houses for the Purple Martin.

"During the recent cold weather, each member fed and cared for the birds near his home. Quite a number are keeping bird-diaries. We sing bird-songs at our opening exercises. Some very interesting maps showing the range of certain species of birds in the United States have been made.

"Our Audubon Society has been one of the most helpful aids to school-work I have ever had. Some boys who were reckless and cruel to birds have become friends and champions of them. As future citizens, they will realize how

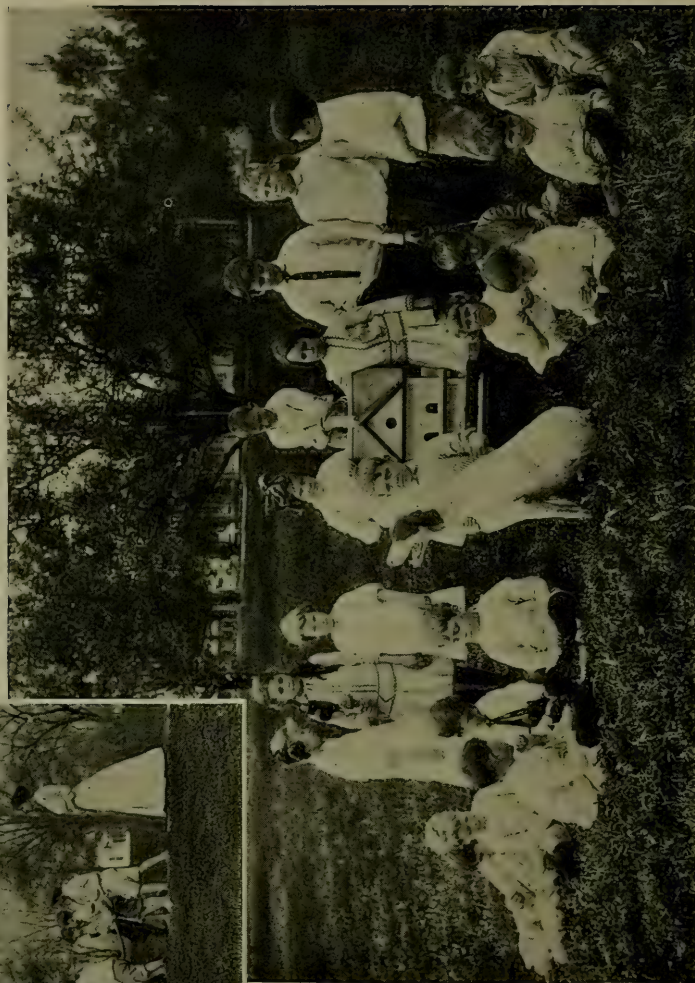


FIFTH-GRADE JUNIOR AUDUBON SOCIETY, RALEIGH, NORTH CAROLINA



SETTING OUT TO PLACE THE
NEW BIRD-HOUSE IN POSITION

EVEN THE DOG IS INTERESTED



SEVENTH PRIZE

AN OUTING OF THE JUNIOR AUDUBON CLASS AT THE MISSISSIPPI AGRICULTURAL COLLEGE



CLUB-WORK AT ST. JOSEPH SCHOOL, ESCANABA, MICHIGAN



A CLASS AT MORTON PARK SCHOOL, CICERO, ILLINOIS

valuable birds are to man, and will protect and spare them."

Rather more formal than most, the Junior Class at the Practice School of the Agricultural College of Mississippi may offer some suggestions to other clubs. It is under the supervision of Miss Ada Joyce Foster.

"This society," Miss Foster writes, "grew out of the daily studies in nature-work, and the children have become very

and in other good ways. The society, as a whole, obligates itself to devote at least one day in each month to the study of bird-life, and discussions of their own observations. Instead of this, they have given ten or fifteen minutes each day in the week, except Wednesday, on which day we have an hour's lecture with the picture-slides.

"Through the study of birds, they have learned much of insect-life; grouping insects, as they do the birds, into 'the good' and 'the bad.' Prof. R. N. Lob-



A WIDE-AWAKE SCHOOL CLUB IN SPRINGFIELD, MASSACHUSETTS

much interested. They have learned to recognize our native birds at sight; to give the names, habits, and place and method of nesting of those that frequent the campus and the surrounding woodland. They have, from observation, learned much of the kinds of food each bird lives upon, and can tell the haunts of each, and the loss per capita in dollars and cents through failure to protect and encourage birds. Each member of this society pledged himself to do something to encourage bird-life on the campus, and upon their home premises. They have made good this pledge by feeding the birds through the winter months, putting up bird-houses near their homes,

dell, of Rosedale, Miss., the director of the Department of Entomology at the Mississippi Agricultural College, offered to give the children of this school one hour, each week, of illustrated lecture. He is one of the few men who can present to children dry facts in a fascinating way, awakening not only interest but enthusiasm in the smallest tots. Consequently Wednesday is a day watched for in impatience."

Hints Helpful to Teachers

The next picture and letter disclose what the Sisters of Notre Dame, at

Escanaba, Michigan, have accomplished among their little people.

"Although our Junior Audubon classes have been so recently organized, we have nevertheless accomplished some work. We are sending you two pictures of our classes, in which several pupils are represented with bird-boxes of their own construction (see page 227), others have the Audubon bird-pictures, and still others, bird-pictures painted by them-

these ways we advanced in bird-lore without omitting anything from the curriculum. The younger pupils were encouraged to tell in class of birds they had seen, and some even ventured to tell of birds they had shot. Then came the teachers' opportunity for emphasizing the need of kindness and protection for the birds, and for encouraging pupils to scatter crumbs for them in the cold winter days. Many of the pupils have bird-boxes already placed in trees and on poles



EIGHTH PRIZE.—FOURTH-GRADE CLASS, MANCHESTER-BY-THE-SEA, MASSACHUSETTS

selves. We have utilized the Educational Leaflets in the following ways: First of all, since all our pupils are interested in water-coloring, we encourage them to paint the outline-copies, besides painting other birds from the charts shown in the pictures. All pupils, whether members of the clubs or not, have written compositions on birds; those who could, wrote something of their own experience. The ninth-grade pupils were permitted to study the bird-lessons, and to deliver them as oral reports during the English period. They also used the same material to distinguish enumerative from suggestive description, and for practice in condensing. In

near their homes, and thus could not bring them for the picture."

Very helpful to teachers who find some embarrassment in learning the method of conducting their classes is the account, by Miss Rebecca L. Harding, of how the meetings of a Junior Class in Springfield, Massachusetts, are sustained in interest. This class was organized in Grade VII of the Central Street School, and is wide-awake, as the photograph on page 228 attests.

"Games, such as 'Bird-Catcher,' and



THE THIRD-GRADE JUNIOR AUDUBON CLASS AT RUSTON, LOUISIANA

'International Birds,' are frequently played for a few minutes, that interest may not lag. The latter is a game similar to 'Authors,' naming the birds by using the final letters of each bird named for the initial letter of the next to be named. Poems about birds are committed to memory; and many of the members have written letters representing themselves as birds who have completed their migra-

tion, and are sending messages from their summer homes to the friends who still remain at the winter resort.

"The accompanying picture shows some of the work of the past winter. Two boys are tying suet to the tree, a third lad is providing a home for some feathered songster, and others are scattering crumbs, or have built houses which they hope will soon be rented at a reasonable price.



A COOKING-CLASS BECOMES A JUNIOR AUDUBON SOCIETY

The boy with a bird-house in the center of the front row is a prize-winner; the two at his right discovered and carefully guarded an Oven-bird's nest containing four eggs, enthusiastically conducted their teacher to the sacred spot and, later, chose to escort the president of our city bird-club to see their favorite resort and introduce him to their adopted family, rather than to attend an anticipated party at which ice-cream and cake were to be served."

The picture reproduced on page 229 is also a product of New England enterprise,

"This class, which was organized last February, and has a membership of 18, meets twice a month. When the roll is called each member answers with the name of a bird he knows in plumage and song. The president has requested every member to make a written report of some bird observed, to be handed in by May and giving an account of the nest, care of young, food and plumage. Out of the material we have received from the Department of Agriculture, the birds in our locality have been selected first from the ten; but we intend to study others known to some of the children.



YOUNG BIRD-LOVERS AT FISHER, AMONG THE LOUISIANA PINES

representing Miss Eliza G. Goldsmith's class, in Grade IV, of the George A. Priest School of Manchester-by-the-Sea. It is evident that these pupils are about to spend a few of the most delightful moments of the school-week.

Experiences in the Gulf States

Next we spring a thousand miles down the coast, and get a report from the High School at Ruston, Louisiana, where the third-grade group pictured have formed a wide-awake society under the leadership of Miss Blanche Heard, who speaks of her charge as follows:

Each member selects a certain point or paragraph from the pamphlet, and adds to it any experience of his or her own that he or she thinks most interesting. Several pieces of poetry have been learned, one about the Meadowlark, and another 'The Bird's Nest.' The field-trips are more interesting to this class, although they do show a great deal of enthusiasm in the reading and memorizing of the poetry about the birds. But to see the birds and hear the song is, to them, so real. We have in view many more field-trips. Several of the boys are making bird-boxes, but only two have completed theirs. The picture exhibits what an eight-year-old boy and a nine-year-old boy can do with rough materials and few tools. It is good for the boys as well as for the birds."



A FOURTH-GRADE CLASS AT MORRISTOWN, N. J.

The picture just below the one taken at Ruston represents a cooking-class in the Madison School at Richmond, Virginia, which has joined with the Junior Audubon Class in scattering bird-food on the roof of their school-building. Probably the birds will come to the feast after the pretty cooks and waitresses have departed. The lady in the first line

is the reporting teacher, Miss Helen M. Hall.

The happy group depicted on this page represents the flourishing society in the fourth-grade room of the Speedwell Avenue School at Morristown, New Jersey. It is under the care of Miss C. E. Beach.

The next illustration carries one in thought from colonial New Jersey to

modern Florida, and shows the club at Palm Beach, in respect to which Mrs. Flora Grice Havill, its organizer, writes an entertaining story:

"This Audubon Class was the result of the interest aroused by a lecture by Dr. Eugene Swope; and, after listening to him, it was easy to arouse enthusiasm in the pupils. I began by reading to them a delightful little book, 'Dickey Downy,' by Virginia Sharpe Patterson, an auto-

program of poems and sketches. We use our leaflets for either a reading- or a language-lesson, or both; and so enthusiastic have the children become that they want to study birds only—nothing else seems to possess enough of life and charm. They have brought in several deserted nests, and some of the boys are making bird-houses. The officers of the society have offered a prize to the class for the best essay, of not less than one hundred and fifty words, on the Robin. They have chosen for judges the supervisor of



THE DICKY DOWNY AUDUBON SOCIETY AT PALM BEACH, FLORIDA

biography of a bird. As I finished the last chapter, my oldest, roughest, and most trying boy laid on my desk a good likeness of the Meadowlark that he had cut from a paper and nicely colored; on the underside were these words: 'I will never kill another bird.' Then every child wanted to bring some story, or a clipping from a newspaper or magazine, pertaining to birds or animals; and some of the boys consulted the sheriff as to the laws for their protection. I then organized an Audubon Society of twenty-six members out of my Fifth Grade of thirty-two pupils, and we named it Dickey Downy Society.

"We have a meeting once in two weeks, at which the officers are learning to conduct a business meeting and a literary

the primary department and the English teacher in the high school; and the contest promises to be a very interesting one."

Methods in Ohio and New Jersey

Ashland, Ohio, has an important Junior Class, composed, as its leader, Ralph D. Richards tells us, of freshmen and junior high-school students, who have shown much interest in birds, and call themselves "The Bluebirds." All are working for new members, and the class has grown from thirteen members to twenty. Its officers are energetic in getting new members, arranging for



FIFTH PRIZE.—THE "BLUEBIRDS" OF ASHLAND, OHIO, BUSILY AT WORK FOR THE BIRDS

meetings, and planning for bird-study and bird-protection. Only workers can be in this class, and the members themselves made a rule that three unexcused absences from meetings cause one to lose his or her membership.

"During the past winter we studied habits and characteristics of birds, so that as the spring came we might appreciate and help them. Our meetings are held once a week after school at the school-house, and once a month in the evening at the home of a member. Miss Eddy,

three distinct Junior Audubon classes have been organized in School No. 11 in that city; and they now have a combined membership of more than one hundred pupils.

"Meetings are held regularly, in which bird-charts are kept, recording the time and place of birds first seen. Family characteristics are studied; also the habits, nests, food, etc., of individual birds, with particular stress on their usefulness. Ways and means of attracting bird-neighbors are discussed. Many bird-houses have



BOYS OF JUNIOR AUDUBON CLASS, No. 732, AT FLINT, MICHIGAN

another high-school teacher, is a member, and helps with the work. We all plan to take early-morning walks together soon, and all look forward with much pleasure to them. Some of the most enjoyable events of my life have been with young people out in the field, watching bird-life and listening to bird-music."

The Class in Flint, Michigan, is so large that it required two pictures to carry all the portraits; the one printed shows that the Flint boys and girls, led by G. E. Sherman, are ingenious architects "in the small," as artists say.

Passaic, New Jersey, is evidently an Audubonian stronghold, for we learn that

been built, with quite as much diversity as to size and architecture as may be seen in human habitations. Mr. Kip, of Passaic, has given the boys and girls permission to use a ten-acre wood-lot for their bird-houses. The principal of the school purposes to have each of the twelve school-rooms put up a bird-house in the trees on the school-grounds. The American Museum of Natural History, in New York City, has loaned the school specimens of birds to be found in the neighborhood. Altogether, much interest has been manifested; and field-trips will be undertaken when the weather permits."

This school enjoys special advantages of situation for bird-study.



READY FOR SPRING WORK AT CHARLOTTETOWN, PRINCE EDWARD ISLAND, CANADA



AN ENERGETIC SOCIETY IN PASSAIC, NEW JERSEY



EXAMINING AN ORIOLE'S
NEST



THIS LAD HAS RISEN TO AN
EXCELLENT OPPORTUNITY



A NEW JERSEY BIRD-LOVER



COLORING LEAFLETS AT KENOSHA, WISCONSIN

Facts from Western Societies

One of the most extensive reports that have accompanied the pictures sent in competition for the offered prizes is that from Kenosha, Wisconsin, by Miss Lulu C. Lampe, who has worked hard for the success she rejoices in. Her picture (page 238) shows the Junior Audubon Class of the Frank School (Grade IV) coloring leaflets. Miss Lampe describes how she utilizes the Audubon enthusiasm in school-work:

"The work in the study of birds was so arranged to correlate with language, reading, drawing, and geography. The nature-study period was used in studying the bird, the drawing period for coloring the outlines in the leaflets; the language time for writing a composition about the bird; and the colored plates were used for the decoration of booklet-covers. All the places spoken of in the leaflets were located on the map during the geography class. Even the music can be taken into consideration, as I have a list of selected songs for each bird studied. In June of last year we took a half-holiday, and went to the woods for a picnic, and also for the study of birds. Each child took a heap-

ing box of lunch, and the teacher treated all to ice-cream. The children's parents have taken a great interest in our club-work. Many have joined our club, and desire to attend our meetings, and our annual picnic. One of the mothers told me that formerly she was bothered by children killing the birds near her house, but that now members of our bird-club did the watching and punished wrong-doers."

Another wide-awake western city, Cedar Rapids, Iowa, is represented by the unabashed group depicted on page 239, which is the Audubon Class of second-grade pupils in the Johnson School. Their teacher is Miss Marie Kugler, who writes:

"Last year we organized a Junior society and enjoyed the work very much. When we found that we could get another set of leaflets and birds to color, my pupils were delighted. Each of the forty-seven pupils in my room is a member, and all take an active interest in birds, and in nature-lore in general. During the winter many of the pupils put food in the trees about their homes, and at Christmas we placed grain and suet in a tree on the school-grounds. Some have reported placing drinking-cups about the yards of

their houses, as well as several bird-houses. We have taken bird-walks, and shall visit the natural-history department of Coe College."

The three illustrations on page 240 are notable. The first is especially interesting because it represents, as its teacher, Miss Julia V. Goodloe, writes, children from the mining districts near Birmingham, Alabama, most of whom are of foreign parentage. It is of great importance to reach this class of our population and get them to understand and appreciate the American view of bird-saving, and the reasons for it.

The pleasing Class-picture from Knightstown, Indiana, is sent by its conductor, Miss Flora Strait; that from South Windham, Maine, (page 223) represents the class on Forest Home Farm, led by C. A. Nash; and the Hummingbird lesson is being given by Miss Florence C. Sammon at Castana, Iowa. This lady writes:

"My bird-class consists of thirty first-grade and second-grade pupils. Although the children are small, I am sure you would smile with pleasure at the birdlore they know. I purchased thirty

copies of your bird-pictures, about thirty different birds. These I mounted, and hung about the room. Every child knows every bird-picture I have; and many are recognizing these birds when they see them out-of-doors, or hear them about town. We also keep notebooks and fasten a leaflet in each one. Thus we can read it at any time. All together we write a story of the bird studied, some pupils offering sentences, and others correcting them until we have a good, readable story."

Virginia's Public Bird Day

It was characteristically accommodating in the always genial Audubon to be born at so proper a time of the year as early May; and it is equally graceful in Governor H. C. Stuart, of Virginia, to proclaim the observance of May 4, Audubon's birthday, as the time when the State's new Bird Day should be celebrated. The establishment of this annual festival of the birds is a notable event for Virginia, and one that rewards a vast amount of patient, persistent, and skillful exertion upon the part of the Audubon workers and bird-lovers of that State;



NINTH PRIZE.—A JOLLY CROWD OF JUNIORS AT CEDAR RAPIDS, IOWA



THE JUNIOR SOCIETY AT WYLAM, A SUBURB OF BIRMINGHAM, ALABAMA



MAKING HOMES FOR BIRDS IN VIRGINIA



AN ACTIVE LITTLE CLASS AT KNIGHTSTOWN, INDIANA



A LESSON ON THE HUMMINGBIRD

and it must be particularly gratifying to Mrs. R. B. Smithey, Secretary of the Virginia State Society, and to Miss Katherine B. Stuart, who have struggled valiantly to win this boon.

The proclamation, a photographic copy of which is reproduced herewith, is an admirable document; and workers in other States may well turn to it as a model in assisting their governors to frame similar proclamations. Other States need, and would profit by, an annual Bird Day quite as much as will Virginia.

The Federal Law Operates

It was reported early in April, by Edward Rayner, deputy United States Game Warden at Hoboken, N. J., that Sooty Terns were on sale in New York City by a dealer named S. Ferster, in violation of the Federal law. Dr. Palmer, of the Biological Survey, who has charge of the enforcement of this law, at once set the wheels of retribution in motion, and a State Protector of Fish and Game very soon had seized 41 pairs of Gulls' wings and 31 pairs of Terns' wings. The offending merchant paid \$50 for his attempt to trade in defiance of law.

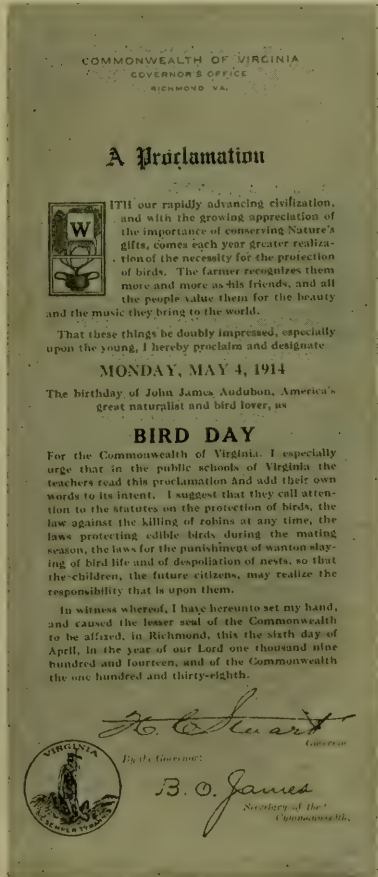
A Girls' Club in Vermont

An interesting history is related by Miss Eliza F. Miller of the Society at Bethel, Vermont, which seems to have arisen

spontaneously and to have unusual strength.

"About three years ago, at Bethel, Vermont, three little girls discovered that I was making a study of caterpillars and cocoons. They often ran into my kitchen to see what changes had taken place, and soon began to hunt specimens for me, and for themselves. Their wonder was great when the caterpillar changed to chrysalis or cocoon, and still greater when the beautiful winged insect appeared. These, if they were perfect, were allowed to float away and be happy. In the winter of 1911-12, notable for its abundance of birds, the little folks saw many Chickadees, Redpolls, and others, at my piazza, and delighted to coax the Chickadees to their hands. Some of them fed the birds at their homes.

"Sometimes I gave them reading-



matter, and in March, 1913, they formed a Nature and Culture Club. This ran a rather irregular course, but they held their meetings, and they earned their first book, Reed's 'Bird Guide.' In November, 1913, these girls learned of the offer by the National Association of leaflets and buttons to any class of ten children, and at once began a canvass for a class. On November 15, twelve girls met in my kitchen for organization, and since then interest has steadily increased. Meetings are held twice a month in the homes of the members, invitations coming weeks ahead. The club is their own, they take pride in it; the mothers are cordial toward it, and new members join it at nearly every meeting.

"They have studied four leaflets, have colored their outlines, are able to answer questions about these birds, and are wide-awake for the spring arrivals. They bring clippings and sketches for the roll-call, and always repeat the Lord's prayer and a psalm, led by their young president. Many are keeping their leaflets for binding. Boxes and tomato cans are going up fast, for bird-houses. The leaflets are

always eagerly received, and carefully studied, as the answers of even the little ones show. The mothers must be learning through helping their children. This plan of work will do wonders for the rising generation.

"For years, teachers in Bethel schools have given the children some instruction in nature-studies, though it is not in the course. This year Miss Ellen Preston is helping her boys to make bird-houses, some of which are bought by the girls in the class. The boys in the front row of the illustration are hers. They do not belong to the Audubon Class, but are interested in their house-building, and are anxious for tenants."

Lists of Members, Etc.

We greatly regret that we have not space this month to print the customary lists of New Members and of Contributors to the Association. They will be given in the next issue of BIRD-LORE; and will be found to be of encouraging length.



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| 21. Scarlet Tanager | 49. Chimney Swift | 72. Wood Thrush |
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| 23. Killdeer | 51. Spotted Sandpiper | 74. Roseate Spoonbill |
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THE WARBLERS *of* NORTH AMERICA

By FRANK M. CHAPMAN

Curator of Ornithology, American Museum of Natural History

With the coöperation of other Ornithologists

*With 24 full-page, colored plates, by Louis Agassiz Fuertes and
Bruce Horsfall, illustrating the male, female and young
plumages of every species, and eight full-page
plates of nests and eggs.*

THE INTRODUCTION

treats of the General Characters, Plumages, Distribution, Migration, Songs, Nesting Habits, Food and Mortality of Warblers.

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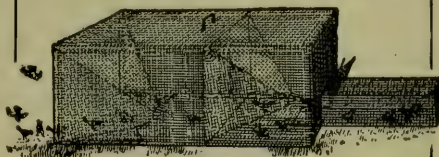
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No. 4

At Home with a Hell-Diver

Some Observations on the Nesting of the Pied-billed Grebe

By ARTHUR A. ALLEN, Ithaca, N. Y.

With photographs by the author

FEW birds are more widely distributed than the Pied-billed Grebe. Occurring from the region of the Great Slave Lake to Chile and Argentina, it differs from most birds in breeding throughout its range. It is, indeed, rather local in its distribution, and in some places almost absent; but the pond, lake, or stream that has not had its 'Hell-diver,' at least during the period of migration, is very exceptional. It is common, it is well known, if familiarity with its name implies knowledge of it, and yet it has been one of the least studied of our familiar birds. Observations on its nesting habits have been extremely desultory; careful studies have as yet not been made.

Nor is this without reason. Few birds offer greater difficulties to the ornitholo-



THE NEST OF THE HELL-DIVER, A FLOATING MASS OF DEBRIS

gist who would become familiar with their lives. During their migration they are conspicuous enough, floating about on the surface of the water, sinking from sight when intently watched, or diving with a saucy flip of the feet at the discharge of a gun. But as soon as the breeding season has begun, no bird is more wary or difficult to observe. Occasionally their peculiar soft love-notes float out from the reeds to indicate their presence, or a few widening circles on the surface of the pond mark the spot from which the watchful bird has espied us, but it is rarely indeed that we can sit and watch them as we would other birds. I have known of three pairs nesting about a small and much-frequented pond, with scarcely a person suspecting their presence; even



THE SAME WITH THE COVERING OF THE
EGGS REMOVED

though one nest, sheltered by only a few rushes, was almost conspicuous from the path not fifty feet away. No one for a moment assumed that the floating pile of debris, anchored near the outer edge of the rushes, and freed from all attempts at architecture, was the nest of a bird, much less that of the Hell-diver which had been heard calling, off and on during the spring, and occasionally seen floating on the open surface of the pond. It resembled more the

platform of a water-rat or a pile of drift stranded by the subsidence of the spring floods. The eggs, moreover, were never left exposed to the hostile search of Crows or water snakes, but were always carefully covered with material from the nest when not actually concealed by the inconspicuous body of the Grebe. Little wonder, then, that the nest was overlooked.

I was first directed to the spot by a friend who said that 'Coots' were nesting there. I was not a little surprised, therefore, when, after wading for a short distance along the edge of the pond, my attention was attracted by a splash in the water ahead, accompanied by a startled note like the syllable "keck," and a few seconds later a Grebe bobbed into sight. Instead of immediately sinking again, as one learns to expect of a Grebe, it rose up on its legs

and began beating upon the water with its wings. Such behavior bespoke something very unusual happening in the nearby nest. I looked just in time to see the last of the striped young scramble from it and disappear beneath the water. Then ensued a series of maneuvers on the part of the bird which were evidently intended to distract my attention. The customary silence, ease, and grace of diving were entirely abandoned. Each appearance above the water was announced by a shake of the body, followed by a beating of the wings on the surface, and a flip of the feet as it again dove, which sometimes sprayed water for more than a yard. This performance took place within ten or fifteen feet of me, and sometimes the bird swam in even closer. At such



THE HELL-DIVER

times it rested rather high on the water, holding its tail, if we may speak of it as such, erect, and nervously flashing the light areas on the flanks, as do the Gallinules.

Meanwhile the young birds had made their way toward the center of the pond. The largest could not have been more than a few days old, and yet, when I tried to catch them, they showed all the ingenuity of the old birds, diving, doubling, swimming with just the bill showing, or lying concealed in a bunch of water-weeds, with only the nostrils above the surface. Had the water been less clear, I probably should have been unable to catch any of them; but, as it was, I could follow them as they escaped in various directions. They were even conspicuous when attempting to hide. I was reminded of the old story of the Ostrich which buried its head in the sand to escape detection; for, in spite of the fact that only the bill was exposed above the water, the

entire body was nearly as conspicuous as though floating on the surface. In diving, as in floating, the wings of the young projected nearly at right angles from their bodies, even more so than in other precocial birds.



FLASHING ITS WHITE FLANK FEATHERS

The largest of the young had already reached the open water beyond my depth, and when I returned to the shore the old Grebe swam toward it, changing her alarm note of 'keck,' 'keck,' to a softer 'cup,' 'cup,' as though calling to it. Swimming beyond it, she turned her tail toward it and slightly raised her wings. This was the signal for the young one to crawl upon her back, which it repeatedly attempted to do until its mother, disgusted with such clumsiness, clapped her wing on its neck and started off at a great rate for the other end of the pond. When far enough away she checked her speed and gave it another chance. Then with her wobbly passenger she continued to the end of the pond, where she was joined by her mate. Here they sported about for some time, the young bird plunging from the the back of one and swim-

but a moment, then the Grebe plunged from the nest and disappeared beneath the water, not to be seen again that day. Hoping to study the home-life of this bird, I cut a few branches and built a partial shelter about twenty feet away; but disappointment awaited me, for when I came back at two in the afternoon and again at five, the Grebe had not returned.



CARRYING OFF THE EGG-SHELL

Two days later found me again at the pond, bent upon studying the old birds with their young and making another trial upon the incubating bird. I arrived about seven A.M., but a careful survey of the whole surface failed to reveal any of the Grebes. Neither was the second bird upon the nest, though the warmth of the eggs attested her recent departure. Securing a boat, I drifted about the pond, searching the edge of the rushes, and soon was rewarded by a movement a hundred yards or so below the first nest. The old bird came

into sight, diving and splashing as before to distract my attention, and I barely caught a glimpse of the young before they disappeared. I realized that it would be futile to try to observe them so long as they had the whole pond for a hiding-place, and I therefore resolved to catch them and limit their range. The next task was to tie threads to their legs and to fasten them near the edge of the rushes where they could be watched conveniently after the old birds should have found them.

After about two hours I returned, but there was no sign of either of the old birds until five o'clock, after the whole day had been spent in fruitless waiting. Then one of them approached, calling 'cup'-'cup,' as it had done before,



INDULGING IN A PRODIGIOUS YAWN

and the young answered with low, lisping peeps. Turning her tail to them, she lifted her wings and waited their climbing on her back, encouraging them to follow by moving slowly away. This they did, but usually reached the limit of their threads before they were able to crawl up completely. I was interested to see whether, after repeated trials and failures on the part of the old bird, she would fathom the difficulty; but it proved entirely beyond the scope of her past experience. I secured a number of photographs of the old bird with the young at her side but as soon as they were safely ensconced upon her back, they snuggled down beneath her wings, hardly ruffling her feathers, and never deigned to raise their heads. The light soon became too poor for photographing so I freed the young and awaited the result. The old bird backed up to them, as she had done scores of times before, raised her wings in the approved fashion and started slowly off. The young were soon safely upon

her back, and this time continued with her. I looked for some expression of surprise or satisfaction, but not one of them blinked an eye. As though this were the first time she had invited them to ride, she swam unconcernedly toward the middle of the pond, where I left them in the gathering dusk.



CALLING TO ITS YOUNG

Eight days passed before another trip to the pond was possible. Neither the old nor the young of the first nest were seen on this visit, but the eggs in the second nest were hatching. The Grebe was incubating when I arrived at eight in the morning, but as I approached she covered the eggs and departed. Her further actions, however, entirely changed; for, instead of disappearing as formerly, she came up again a few yards away, and began beating upon the water with her wings even more frantically than had the first bird. She continued diving and splashing until the camera was ready, when she inconsiderately desisted.

Only one of the eggs had hatched, and the young had been covered with as much care as the eggs. The eggshell was gone. Concealing the camera near

the nest, I pulled my boat into some bushes about fifty feet away, from which an unobstructed view could be obtained. It was evident that the instinct to protect the nest had been greatly augmented by the hatching of the first egg, but whether this would extend to the instinct to incubate was yet to be learned. The Grebe soon came back to the vicinity, but was evidently alarmed. Most of the time it swam back and forth behind the nest, flashing its white flank feathers; occasionally it peered into the nest, but, even after hours of waiting, when its nervousness had entirely disappeared, it showed no disposition to ascend the nest. It certainly appeared as though incubation were unnecessary with this bird. After about three hours, when hope had almost vanished, something seemed to arouse its interest, and suddenly, without the slightest



THE OLD BIRD SWAM UP TO MEET IT

hesitation, it sprang upon the nest and began prodding into it with its bill. At first I was at a loss to understand such strange actions, but, upon a closer view, saw that another egg had hatched, and the old bird had been assisting the young from the shell. A white substance which I had seen in the bill of the Grebe as she was departing must have been a fragment of eggshell, as

half of it had disappeared. Hardly was I back in the blind before the bird returned, and, again without warning, sprang lightly and gracefully upon the nest—this time to seize the remaining fragment of shell, lest by its conspicuousness it should add to the manifold dangers of her newly hatched young.

She carried it but a short distance away, however, and dropped it into the water.

The first-hatched young, having now become quite lively, had struggled free from the weeds with which it had been covered; but the newly-hatched bird was still very weak, and most of the time lay on the bottom of the nest with its neck outstretched. Occasionally as though not yet recovered from its previous cramped existence, or as though bored with the stern horizon of the life before it, it raised its



CLIMBING ABOARD

head and indulged in a prodigious yawn—a yawn such as *Ursus* might give when aroused from his winter's sleep. A more scientific diagnosis might have explained these yawns as physical rather than emotional; but, to my eye untrained in Podicipian infirmities, they expressed only weariness and acute ennui.

I next uncovered the eggs and young, thinking that the old bird might see fit to get upon the nest and cover them. I was disappointed, however, for, as she approached, she changed her alarm (*keck*) note to the call-note (*cup*), and the first-hatched was strong enough and obedient enough to scramble from the nest. The old bird swam up to meet it, backed up, lifting her wings, and a moment later started off with her youngster upon her back, leaving me to spend the rest of the day awaiting her return, communing with muskrats and dragon-flies and the omnipresent mosquitos.

Sixteen days passed before my next visit to the pond, when, of course, all the eggs had hatched and the young had left the vicinity. One hundred yards down the pond and quite in the open at the outer edge of the rushes, I flushed

the old bird and several young from a new nest that had evidently been constructed as a sort of roosting- or resting-place. The down of the young is evidently not as impervious to water as are the feathers of the adults, and it is necessary for them to emerge from the water occasionally to dry off. Whether the original nest would have been used for this purpose if it had not been disturbed, cannot be said; but I am inclined to believe that these 'roost-nests' are frequently constructed, as several more were found in other parts of the pond, probably built by other Grebes. In construction they were similar to the regular nests, except that the hollow, never having been filled with debris was always better formed. The young at this time, although but sixteen days old, showed remarkable growth; but I was forced to cease my observations at this point.



THE FIRST RIDE

The Morning Bird Chorus in Pasadena

By GARRETT NEWKIRK

THE full chorus begins here, as it does everywhere else, with the dawn—that is, when there is just enough light in the sky to show that day will come in a few minutes, and yet quite dark all around and beneath. Some bird, awake and more watchful than the others, or advantaged by his position on the sunward side of a tree, gives forth the first note.

If *you* are awake and listening, you may hear it. At the time of this writing, May 15, it will be by the clock, "western time," about 4.15. Most people never hear the bird chorus because they are asleep at that time. If they were awake, they would hardly note the first bird-voice; they would not be listening for it.

In this world we usually see what we are looking for, and hear what we listen for. We have in mind, as a rule, whatever we seek and find. Even if we are startled, surprised by something, the mind has in some way been prepared by training for its recognition.

It seems as if the first bird wakens a number of others; they add their voices instantly to his, and in a few moments all the birds are awake. Every one adds his note of joy. The effect is more than a song or chorus, it is a *cheer*. It might remind one of a political mass-meeting, when some leader stands upon the platform, waves his cane, and calls out "*Hip, hip, hurray!*" and all join in, each at the top of his voice, "*Hurrah!*" and again, "three times three," "*Hurrah!*"

So the birds are cheering the coming of the day, not with a hoarse and strident "*hurrah,*" but each with his joyful song.

The full chorus will continue, however, but a few minutes. As the light increases, sentiment gives way, as it does in human life, to practical necessity. One by one, the songsters are impelled by their all-night fast to seek their breakfast where it may be found, and they know. Some know that breakfast is not ready yet for them, and keep on singing. Some sing at intervals between the courses of their meal; but the real "chorus" is soon over; just as the enthusiastic democrats or republicans may continue cheering on their way home or at their front gates, so do the birds.

This bird chorus might be likened to a pyramid of music with the base at dawn and the apex at six o'clock, when they are all too busy to think of singing very much.

When the chorus is in full, only the trained ear could distinguish each of the many voices engaged, or a majority of them. Some of course are loud and evident; others must be listened for particularly. I am sure that I cannot segregate the half of them, for every voice, from the least to the greatest, joins in.

Each one as if a dozen songs were chorused in his own,
And all the world were listening to him, and him alone.

In my own immediate neighborhood, in Pasadena, surrounded by considerable open space with trees, the leader of the chorus in May is certainly the Black-headed Grosbeak. He gives the first, or one of the first notes, and his voice may be heard almost continuously above all, and the sweetest, too, unless it be the Western Meadowlark, who surpasses his brother of the East, in the compass and clearness of his songs.

But the Grosbeak sings on all day, and up to the very dark. He seems loath to cease for the evening shades. He is like some happy housewife singing at her work, singing to her babes, singing to herself, and to all whose ears are attuned to hear the voice of gladness anywhere.

I may be mistaken, but it seems to me that our Mockingbird takes second place in the chorus. He is, of course, our star performer, and knows it so well that he likes to be a soloist. He is apparently a very self-conscious sort of bird, an actor posing for effect and special recognition. I know that no mere man is capable of judging really the 'soul of a bird;' but Mr. Burroughs has a similar impression as to the Mocker, even to the extent of aversion that I do not have. He thinks the Mocker is just a cold-blooded artist, with no real feeling in his performance. Well, the Mockingbird would not be willing to be left out of anything going on in public, so he joins now and then our morning chorus. But I have the feeling that he isn't exactly pleased to be outclassed by the Grosbeak, and overborne by the volume of sound proceeding from the throats of all those inferior birds.

The Arizona Hooded Oriole (who builds usually here on the under side of a broad palm leaf) may be heard occasionally in the chorus by a trained ear, but he does not specialize in music. His glorious beauty and charming manner fully compensate. Bullock's Oriole has a voice of emphasis, easily distinguished, and he likes to exercise it in the morning air. It is not specially musical, and seems to have a challenge in it, "Touch me if you dare! I'll keep my place if you'll keep yours." Bullock's is the western representative—close brother or cousin—of the eastern Baltimore.

Easily distinguished in the chorus will be the voice of our Song Sparrows. We have a number of varieties, or sub-species. (Some who have been winter-visitants are not here now, but a number of others remain.) Their mingling strain is delightfully sweet, and ever remindful of the old voice we used to hear back east. Equal to it? Not quite, I think; but we are happy to possess the song of second quality, as we cannot have the first. It is delightful, anyway.

Early in the season—February or March—the California Thrasher, bird of the foothills, is quite sure to come singly or in pairs for a vacation in town.

A plain, brown bird and slender, with delicate, curving bill,
No great pretense of feather but a voice to make you thrill.

Only once or twice I have heard of a pair nesting near a house. A chief attraction for the Thrasher is the rich ground of our gardens and orchards,

where worms are plentiful near the surface; and he is a wonderful scratcher. I have seen him cultivating the flower-beds, even, and he is very fond of my bread bits. His song is delightful and unique. It reminds me at times of the Catbird's, though much louder, and of certain notes of the Mocker.

Along the arroyo often, elsewhere occasionally, one might distinguish in the chorus, and hear at intervals all day, the delicate, clear strain of the Phainopepla, that beautiful creature, iridescent bluish black with pointed crest, wing-bars of gauzy white; worth going far to see.

But the singers never absent from our chorus, enthusiastic, continuous, are the Linnets, or crimson-throated House Finches, happy and unpopular. We could ill afford to spare them from our chorus, or their cherry singing all day long, injurious though they sometimes are to bud and fruit.

If our friends, their enemies, would take the trouble to cut in two some of the millions of 'cull' oranges that are otherwise worthless, and scatter their halves daily on the ground, the Linnets would find in them much of the fruit acid they crave. They are not vicious, just dear and joyous.

Then, we have in our chorus, too, the "Warbler's minor music," faintly heard, and the small notes of minor Sparrows. Little Chippie, near my window this morning, was 'chipping in' with the regularity almost of a clock-tick, and something like it. He was doing his best, but, contrasted with the bell-like tones of the Grosbeak, the effect was amusing.

And then we have the sweet little notes, that touch your heart whenever you hear them, of our dear little Willow Goldfinches. Occasionally will sound the strident note of our Flicker, nearby or a block away, just to let you know he's here, and has a nest in some old tree or telephone pole half a mile off. He's a glorious bird, with rich old-gold, instead of the lighter yellow of his eastern cousin.

In a lull of the chorus growing less, you may hear, if you listen closely, a little squeak in the bushes, of the Brown Towhee, our very exclusive, usually silent citizen. But he *can* sing, if he will, a solo or duet. I have heard it just once.

Along the arroyo, where some people are protecting coveys of Valley Quail, their entrancing notes are heard, not only in the chorus but at other times, notably at the sunset hour.

And nearly all these birds of the chorus I may see each morning later in my back yard, beneath the spreading branches of a great pepper tree. There I have scattered the night before, a plentiful supply of bread and other cereal scraps, to be in early readiness. There, too, is the dripping hydrant and basin for their use. No meat scraps are thrown out till later; those might attract the cats. They, however, seldom appear on my premises, having been discouraged in divers ways.*

*Every center of population, and important premise should have plots of ground known as "catcombs."

Is the morning bird chorus worth waking for? I think so. If I could not awake otherwise, at the "first peep o' day," I'd set an alarm clock to call me at least once.

If enthusiasm, hope and joy are contagious, surely one could not afford to miss entirely the inspiring chorus of the birds, when they are

Calling on the world asleep to waken, and behold
The king in glory coming forth along his path of gold.



THE PEWEE'S NOTE

*The voice of your sadness
So sweet is, Pewee,
With voice for your gladness
A songster you'd be.*

—E. J. SAWYER.





RAPIDS OF MANOA (FROM ABOVE), RIO PRETO

As the water recedes, great ledges of rock covered with a coat of mud containing a small percentage of salt are left exposed. Macaws in great flocks come to feed on these saline deposits. In the rapids of San Vicente, Gy-Paraná, many hundreds are killed annually by the rubber-gatherers with clubs and used for food. Photographed by Tiuba.

Destruction of the Rhea, Black-Necked Swan, Herons, and Other Wild Life in South America

By LEO E. MILLER

NO ONE will question that the federal law prohibiting the importation of the plumage of wild birds, has achieved results of far-reaching importance. Perhaps in no other country has its effect been so immediately felt as in South America.

In the early part of November, 1913, as a member of Colonel Roosevelt's South American Expedition, I had occasion to spend a week in Buenos Aires. Following my usual custom, I visited the various natural history stores, curio shops, and exporting houses, for in this manner I have occasionally succeeded in adding a rare specimen of real scientific value to the collections.

Newly made acquaintances interested themselves in my behalf, had furnished letters of introduction to Mr. Hahn, the Guatemalan Minister, who had at some previous time been a controlling figure in the natural-products export business. From Mr. Hahn were secured the letters that opened to us the inmost recesses of the warehouse of M. Elli, probably the largest concern of its kind in South America. Mr. Elli personally conducted us through his establishment.

At first the bales and heaps of mammal skins held my attention. Prominent among them were many thousands of skins of the otter, although this animal is fast disappearing from its old haunts. Our guide explained that the firm furnished the traps, and that a good man, upon discovering a lake or stream inhabited by otters, could catch all the inhabitants of the colony with great ease, visiting the traps several times each day to remove the captives. I think the government of Argentina was contemplating the adoption of some protective measure, at the time of our visit, to prevent these animals from being entirely exterminated.

Probably next in order of abundance were the skins of deer, those of the great, beautiful marsh deer predominating. The smaller mammals such as rabbits, skunks, opossums, coypu rats, and various small rodents, were well represented by thousands of pelts. One great bale that excited my curiosity was found to contain the breasts of Penguins,—many hundreds of them.

My attention was next directed to the ceiling. We were in a great, long, barn-like room, the 'ceiling' of which was supported by strong rafters that ran, close together, the length of the room. On nails and hooks driven into both sides of these rafters, hung immense bunches of entire skins of the Black-necked Swan. There were many, many thousands of them, and, as we looked in speechless amazement, our host explained that at certain seasons of the year these birds congregated on the rivers of Lower Argentine in great numbers, and that a good gunner could usually kill several at one shot. I ventured to

inquire for what purpose these skins were used; and was told, though not in these same words, that the only excuse or reason for this wholesale slaughter of the beautiful and graceful creatures was to supply the women of the civilized world with powder-puffs. I wonder how many women have realized



RHEAS IN THE ZOÖLOGICAL GARDEN AT BUENOS AIRES
Photographed by L. E. Miller

this gruesome fact, when insisting on "genuine swan's down" when purchasing the fluffy daubers! But the greatest surprise of all was still awaiting us.

I was called into the office and given the opportunity to listen to some rather heated arguments against the laws that had recently been enacted in my country, prohibiting the importation of wild birds' plumage. And by degrees it dawned upon me that the concern had a large sum of money invested in a stock of these goods, upon which it suddenly found it impossible to realize. As proof, I was shown into a lower storeroom almost completely filled with enormous burlap-covered bales that were stacked from floor to ceiling. These were filled with Rhea feathers, and I was repeatedly assured that they had all been taken from *wild killed birds*; and that practically the only market that existed for these feathers was the United States of America, where they were manufactured into dusters. No other country imported sufficient quantities to render their collection profitable. As I vainly tried to estimate the quantity that was housed within those four walls, I was relieved of all difficulty by being told that there were exactly sixty thousand kilos—approximately

sixty tons. Next day I purchased a copy of the bulletin giving the statistics of Argentine imports and exports. I found that 34,206 kilos, over thirty-four tons of Rhea feathers had been exported during the first six months of the fiscal year. Later, while strolling through the zoölogical gardens of Buenos Aires, I came upon two splendid specimens of the Rhea insolently blocking my path, and I wanted to congratulate these fortunate individuals upon having escaped the general massacre.

The markets of Buenos Aires, at this season, were abundantly supplied with Solitary and Pectoral Sandpipers, and Greater and Lesser Yellow-legs. Tinamon of two species (*N. maculosa* and *Colopersus elegans*) were offered by the barrel and basketful. In Asuncion, Paraguay, small birds, including Tanagers and Ovenbirds were occasionally on sale, plucked, though in small numbers.

Several months later I was spending a short time among the Portuguese planters on the Lower Madeira and Solimoens, where are found the impenetrable swamps interspersed with shallow lagoons. It was the beginning of the nesting season, and Herons were donning their fatal nuptial garments. An agent had visited the locality a short time before, offering to buy all aigrettes collected at three contos of reis (about \$1,000) per kilo (about 2 lbs.). Judg-



PORTUGUESE PLANTERS' HUT ON THE SOLIMOENS WHERE LARGE
NUMBERS OF EGRETS ARE KILLED

Photographed by L. E. Miller

ing by the numbers of the birds as I had seen them, and they were not extremely abundant here, I was calculating how many shots would be required to secure enough birds to produce two pounds of aigrettes, and if the high price of ammunition in Brazil would make it a profitable occupation for the natives. The birds seemed fairly safe. My swarthy Portuguese friend

for a time ventured no information beyond answering my questions. Then decided to admit me into his confidence; and the single word "veneno" spoke volumes.

About the time the Heron's plumage is at its best, the annual floods have begun to recede, leaving shallow lakes and marshes teeming with myriads of imprisoned fish. And as the drying-up process continues, the stranded fish die in heaps. I saw tons of them—dying, dead and decaying—in the **pan-tanales** on the Taquary. It was the season of harvest for the Jabiru, Heron, Vulture and opossum, and they were enjoying their periodical feast to the full.

It is the custom of the plume-hunter, I was told, to collect quantities of these fish, poison them, and then scatter them broadcast over the Heron's feeding-grounds. Occasionally, poisoned shrimp are used, if the inundations extend beyond the usual time. This method is of course cheaper than shooting: the birds are not frightened away, and the results of such relentless persecution must be obvious. A whole colony may be exterminated in its feeding-grounds, even if the rookery is impregnable.

I do not know to what extend this process of extermination is carried on. I have never seen it in operation, and had never heard of it elsewhere. But such, my informant assured me, are the methods employed on the Madeira and Solimoens.



MOURNING DOVE

Photographed by Guya Bailer, Geneseo, N. Y.

Comparative Abundance of Birds

A Letter from Abbott H. Thayer

EDITOR OF BIRD-LORE:

I send you herewith a letter from Professor Münsterberg.

Having long believed that our common birds are not widely diminishing, except in certain special cases where circumstances of civilization have ceased to sustain them at an artificial abundance (as in the case of Swifts and Barn Swallows), I asked Prof. Hugo Münsterberg, the Harvard Professor of Psychology, to corroborate my belief that circular question-lists sent about to gather the public opinion on this subject are dangerous and misleading, because of the very psychological reason that he gives in the accompanying letter.

His answer sent you herewith should influence all the local Audubon Societies who publish such dismal announcements. These Societies will swiftly diminish their own credit by such an unscientific position.

Let me here say that I go annually over my boyhood stamping-ground around Keene, N. H., a small city of ten thousand inhabitants, now about twice the size it was fifty years ago when I knew every foot of its surroundings. Every meadow has still its Meadowlarks and, close by the town, one of the principal meadows has still its Upland Plovers; although I do not, of course, class this species with the rest. Bobolinks are everywhere that they ever were; hundreds of them, young and old, crowd the fences, the grass, and the tops of the neighboring groves, when the year's generation is accomplished. Every wet place has its Redwings; the elms their Orioles and Grackles; the river its Spotted Sandpipers and Wood Ducks. Bluebirds are just now scarce hereabouts, but I saw three or four pairs last week in Keene, and, to my great joy, Nighthawks seem to be picking up. There, again, they build on the tops of the stores about the center of the town. It is true, I saw only one individual there, the other day, but it was the first for several years; we have seen four in all, hereabouts, this year. In this region Hermit Thrushes still seem less numerous than up to 1912, and in Dublin I have seen no Bluebirds this season; but, taking the whole region together, its bird fauna is, in my belief, unabated. Its Robins, Bobolinks, Catbirds, Kingbirds, Flickers, Orioles, Warblers, Swallows, Flycatchers, its three kinds of Vireo, its Meadowlarks, Spotted Sandpipers, and many other species, are all at their posts, and this, in my belief, is all there ever were. Of course, all species fluctuate, and the Hermits and Bluebirds will doubtless abound again.—A. H. THAYER, *Monadnock, N. H.*, May 31, 1914.

Professor Münsterberg's Letter

CAMBRIDGE, MASSACHUSETTS, May 28, 1914.

My dear Sir: You raise the interesting question of whether the testimony of those who claim that many species of bird are today less common than

formerly is reliable. I should say that such testimony underlies all the well-known illusions which are today familiar to the psychologist through recent experimental studies concerning the value of evidence on the witness stand. The illusions of perception, of memory, of suggestion, of attention, play an important role there.

In this particular case, it may be taken as probable that, looking backward, the imagination exaggerates the pleasure received from such birds in the past in comparison with the present experience. If the feelings were different, if it were the question of dangerous birds, or of birds disliked for any other reason, the suggestive illusion would probably be the opposite. The observers would have the impression that there are more birds today than formerly, because displeasures of the past are easily underestimated as compared with present displeasures. I should not trust such impressionistic records at all.

Very sincerely yours,

MR. A. H. THAYER.
Monadnock, N. H.

HUGO MÜNSTERBERG.



FEMALE REDSTART, NEST AND YOUNG
Photographed by Arthur A. Allen, Ithaca, N. Y.

Why the Birds Are Decreasing

By ROLLA WARREN KIMSEY, Lathrop, Mo.

BIRDS are a great deal like people. There is probably no bird, regardless of what its reputation for good may be, but that does some harm.

Most of our best-known insect-destroyers are also great lovers of fruit; devouring large quantities of cherries, strawberries and grapes. I think, however, that, all things considered, the good done by the feathered folk is sufficient to credit them, as a class, as the friend of man. Then, if it is a fact that the birds are decreasing, it is time for something practical to be done for their protection.

The first thing I desire to set forth is that the breeding-places are being destroyed. I have in mind a certain territory where hawthorn, red thorn, wild plum and crab trees, wild rose-bushes and other small, thick bushes grew in profusion along the streams, fence-corners and roadside. These furnished an ideal nesting-place, and also protection, for the Catbird, Brown Thrasher and Mockingbird. Then there were miles of hedge-fence, so closely matted that it was almost impossible for one to locate or reach a nest within the thorns. In these places I have found dozens of nests in the course of an afternoon stroll. Now this land has been steadily advancing in value, and as a result, the brush and thickets have been cleared away, the hedge-fences uprooted, and along the roadside appears the neat wire fence. The birds that once found shelter and protection for their nest and young have been forced to build more in the open, or to leave the neighborhood for more desirable nesting-places. So, with less protection, a greater number of their young are being destroyed each year. I go over the same ground, and consider myself fortunate if I find three or four nests where in previous years I have found many, with little effort.

Around almost every farmhouse there are from six to fifteen half-fed cats. In the villages and cities there are hundreds of them, homeless, and living as it were by their wits. The birds, that love the friendship and companionship of man, build their nests in the great trees around the house, and in the old neglected orchard, which knows nothing about a pruning-hook or saw. In one of these old trees I have seen the nest of a Woodpecker in a decayed stub; up in a substantial fork, the nest of a Robin; and on a low, flat limb, a Dove over her eggs. But now the old orchard has given way to closely trimmed, business-like trees, in which a nest would have no more protection than out on the highway. I have stood in some yards and counted ten and twelve nests, without moving. Now it is about the yard and orchard that the cat gets in its most deadly work. It is impossible for young birds to stay in the trees when learning to fly; in fact, one will find them on the ground nearly as often as in the trees. And how often have I been reading in the shade, on some summer day, to be aroused by the cry of a fledgling Oriole or Robin, as it strug-

gled in the jaws of a wretched cat. This is going on constantly, for there is no food for which a cat will seek more diligently than young birds, in nesting-time.

In the territory of which I speak, there are only two birds that seem to hold their own: the Meadowlark and the English Sparrow. I need not go into detail about the latter, but shall give a reason as to why the Larks have, to all appearances, held their own, and seem to be as numerous as ever. Their breeding-places have been increased. I mean that the timothy and clover fields furnish ideal nesting-places for them; for, as soon as the young leave the nest, they are well protected by the long grass from Hawks and any 'varmints' that would prey upon them. If one ever attempted to catch a young Lark in the tall grass he will readily understand my position, when I refer to the hay-fields as protection. Then the rapidity with which Quails will multiply, when given a closed season, bears out the position that any bird that builds in the grass is well protected.

What is the remedy? It must come through the states, and from the counties within the states. Every county should have a bird park, where rose-bushes, buck bushes, plum thickets, thorn trees, and all kinds of wild trees, can grow in rank profusion. The park will become a sort of a recruiting point, as the birds will soon learn to nest there; and, if the farmers are instructed to encourage the growth of thick shrubs along their fence-rows, the birds will scatter out over the country.

Cats in town should be taxed and required to wear a small collar. This would cull out a large number of the prowlers. Then our farmers need some advice along the cat line.

Finally, there are only two questions before us: Do we need the birds? Are they decreasing? If an affirmative answer is given to the above questions, I shall add, no expense should be withheld for their protection.



The Migration of North American Sparrows

TWENTY-NINTH PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

(See Frontispiece)

LARK BUNTING

Wintering in northern Mexico, and less commonly in southern Texas and southern Arizona, the Lark Bunting begins its northward journey in early March, but migrates so slowly that it is the first of June before it reaches the northern limit of its breeding range. Its principal home is on the treeless prairies just east of the foothills of the Rocky Mountains, whence it spreads west in migration to southern California and has wandered east to Mount Pleasant, S. C., April 19, 1895; Montauk Point, N. Y., September 4, 1888; and Lynn, Mass., December 5, 1877.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Southern Arizona.....	5	March 1	February 13, 1910
Pilot Knob, Calif.....			April 6, 1890
Southern New Mexico.....	2	April 6	April 3, 1892
Pahrump Valley, Nev.....			April 29, 1890
Springfield, Colo. (near).....	3	April 29	April 27, 1908
Beloit, Colo. (near).....	5	May 2	April 28, 1894
Yuma, Colo.....	5	May 8	May 4, 1906
Denver, Colo. (near).....	14	May 14	April 28, 1889
Cheyenne, Wyo.....	4	May 10	May 7, 1888
Badger, Nebr.....	4	May 7	May 4, 1900
Valentine, Nebr. (near).....	6	May 9	April 22, 1894
Rapid City, S. D.....	5	May 10	May 6, 1906
Harrison, S. D. (near).....	9	May 13	May 10, 1891
Lanesboro, Minn.....			May 11, 1884
Terry, Mont.....	8	May 15	May 10, 1893
Aweme, Manitoba (near).....	7	May 22	May 15, 1908
Indian Head, Sask.....			May 15, 1908
Dinsmore, Sask.....	3	May 26	May 22, 1909
Flagstaff, Alberta.....	3	May 31	May 24, 1909

The last were noted at San Antonio, Tex., on the average May 6, and the latest May 13, 1899; the last in the Huachucas, Ariz., May 16, 1902; and at Poway, Calif., May 25, 1886.

The southward movement in the fall begins so early that by July 27, 1881, the first appeared at Brownsville, Tex., several hundred miles south of the breeding range. The average date of the first seen in southern New Mexico is August 2, earliest July 31, 1901, and in southern Arizona, average August 7, earliest August 5, 1909. An unusually early individual was noted July 20, 1905, at Santa Barbara, Calif.

The last one noted at Badger, Nebr., was on September 28, 1899; Rapid City, S. D., average October 1, latest October 2, 1911; Yuma, Colo. (near), average September 13, latest September 21, 1891, and Carrizozo, N. M., October 28, 1902.

SHARPE'S SEEDEATER

The principal home of Sharpe's Seedeater is in northeastern Mexico, but some individuals migrate north in summer to the lower Rio Grande Valley of Texas, and at this season the species is fairly common locally in Cameron and Hidalgo Counties. It arrives on the average near Brownsville, March 18, earliest February 21, 1880, and may occasionally winter, as one was taken January 30, 1889 at Brownsville.

Notes on the Plumage of North American Sparrows

TWENTY-EIGHTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Sharpe's Seedeater (*Sporophila moreletii sharpei*, Figs. 1, 2).—The plumages of this little Seedeater are still a puzzle to ornithologists. In southern Mexico and southward, the adult male has a jet-black back and broad black breast-band, but in northeastern Mexico and the lower Rio Grande Valley in Texas, no specimen of this kind has been taken, and our plate (Fig. 1) shows as mature a male as is known from this region. It is because of this difference in the plumage that a northern race of the bird has been described; but whether in this northern bird the back and breast never become black, or whether as yet a fully adult male has not been found, is an open question. In my opinion, the first-named condition is correct; in other words, Sharpe's Seedeater never has the back and breast-band wholly black. Consequently, in its fully adult plumage it resembles the southern race of this species (*i.e.* Morellet's Seedeater) in immature plumage.

The case is unusual and doubtless requires further investigation. In the meantime, I have not the material for a satisfactory study of this Seedeater's plumage changes. The case is complicated by the impossibility of determining whether winter specimens from southern Mexico are residents or migrants from the North.

Lark Bunting (*Calamospiza melanocorys*, Figs. 3-5).—It is difficult to explain under any theory of protective coloration, the relation between the plumage and the haunts of the male Lark Bunting. Conspicuous in color, and action, it inhabits the open plains where cover is scant and where one might well imagine it was exposed to such enemies as it may possess. The female, however, is in a high degree protectively colored; and, indeed, it is

only during the mating- and nesting-season that the male wears his striking black-and-white costume.

The nestling male is buffy white, faintly streaked below; above the feathers are blackish margined with buffy, producing a somewhat scaled appearance. At the postjuvénal molt the tail and wing-quills are retained, the rest of the plumage molted. The new plumage (first winter) resembles that of the female but the wings and tail are blacker and there is more black on the underparts, particularly on the throat.

The breeding or nuptial plumage is gained by a spring or prenuptial molt, in which, as in the postjuvénal or first fall molt, the tail and wing-quills are retained. The body plumage, wing-coverts and tertials are shed and replaced by the black-and-white breeding-dress. Birds in their first nuptial plumage may now be distinguished from fully mature birds by their browner wings and tail and, often, less intensely black body feathers.

At the postnuptial or fall molt, which, as usual, is complete, the bird assumes a costume somewhat like that of the first winter; but the tail and wing-quills are now fully black and there is more black on the underparts.



WOOD PEWEE

Photographed by Guy A. Bailey, Geneseo, N. Y.

A Coöperative Study of Bird Migration

ALTHOUGH we received seventy-one reports on the migration of the first group of birds—Robin, Red-winged Blackbird and Phœbe—(including five that were held and sent with the second group), only forty-four reports on the Chimney Swift, House Wren and Baltimore Oriole have come in. Therefore we cannot make such comparisons nor come to such conclusions as might have been possible from a larger number of returns. It would have been interesting, for instance, to see whether the Swifts reached Nova Scotia from the mainland, as the Robins apparently did, or entered the south end directly, from over the water.

The migration of the present three species called forth few comments as to its being unusual in any way. Pittsburgh reported all three as being uncommonly early, Milwaukee that the Oriole was four days ahead of its record, and New Haven that the Swift and Wren were late. For all three species the Mississippi Valley dates average several days earlier than those of the Atlantic coast.

The Chimney Swift averaged the earliest species to appear and to become common, though at some stations, particularly in the north, it was the latest. The first individuals took just a month from southeastern Pennsylvania to the far end of Nova Scotia. As with the Robins, after passing New York City, those that continued along the coast went much faster than those that followed up the big river valleys. Swifts reached northern Vermont but three or four days before others reached northern Nova Scotia, though the former is three hundred, and the latter seven hundred miles from New York. That makes the advance of the species along the coast about thirty-two, and up the Hudson and Champlain Valleys less than seventeen miles a day. This rate is much slower than the Robin's, which was forty-seven and twenty miles, respectively.

Although the House Wren breeds north to New Brunswick and Quebec, it is apparently too rare north of southern New England to be counted on regularly. In the Middle West, however, it is common much farther north—as far as these records extend. In Norway, Maine, "In 1911 several bird-houses in town had one lone House Wren, who made a nest and sang and waited for a week or two, but no mates arrived and they disappeared. We never saw them before or since." It is remarkable that this species was noted at Viroqua, Wis., twenty days earlier than at any other station in that state, and thirteen days earlier than at any other station from Missouri northward,—in fact, it became common there six days before it was first seen elsewhere in Wisconsin.

The Baltimore Oriole seemed to become common at substantially the same date along a line from the lower Delaware Valley to southwestern Maine (except at Bernardsville, which is in the hilly interior of northern New Jersey), and to reach, several days later, points farthest to either side of that line,—Orient, Bournedale, Clarendon and St. Albans.—CHARLES H. ROGERS.

Reports were received from the following localities and persons:

Atlantic Coast District.

Berwyn, Chester Co., southeastern Pa.—Frank L. Burns.
Andover, Sussex Co., northwestern N. J.—Mrs. W. K. Harrington.
Bernardsville, Somerset Co., central northern N. J.—John Dryden Kuser.
Port Chester, Westchester Co., southeastern N. Y.—James C. Maples, Samuel N. Comly, Paul C. Spofford, Bolton Cook.
New Haven, New Haven Co., central southern Conn.—Aretas A. Saunders.
Orient, eastern Long Island, N. Y.—Roy Latham.
Waterbury, New Haven Co., western central Conn.—R. E. Platt, Mrs. Nelson A. Pomeroy.
South Auburn, northeastern R. I.—Harry S. Hathaway.
Providence, northeastern R. I.—Roland Hammond, Lucy H. Upton.
Cambridge and vicinity, Middlesex Co., eastern Mass.—Myles Peirce Baker.
Bournedale, Barnstable Co., southeastern Mass.—Ethel L. Walker.
Norway, Oxford Co., southwestern Maine.—Corabelle Cummings.
Milton, Queens Co., southern N. S.—R. H. Wetmore.
Antigonish, Antigonish Co., eastern N. S.—Harrison F. Lewis.

Hudson and Champlain Valleys.

Hyde Park, Dutchess Co., southeastern N. Y.—Harry T. Briggs.
Rhinebeck, Dutchess Co., southeastern N. Y.—Maunsell S. Crosby.
Clarendon, Rutland, Co., central western Vt.—L. Henry Potter.
St. Albans, four miles north of, Franklin Co., northwestern Vt.—Lelia E. Hon-singer.

Ohio Valley.

Urbana, Champaign Co., central eastern Ill.—Frank Smith and collaborators.
Marco, Greene Co., southeastern Ind.—Mrs. Stella Chambers.
Huron, Erie Co., central northern Ohio.—H. G. Morse.
Detroit, Wayne Co., southwestern Mich.—Mrs. F. W. Robinson.
Pittsburgh, within 10 miles of, Allegheny Co., central western Pa.—Thos. D. Burleigh.
Collins, Erie Co., southwestern N. Y.—Dr. Anne E. Perkins.
Geneva, Ontario Co., southwestern N. Y.—Otto McCreary.
Aurora, Cayuga Co., southwestern N. Y.—Matilda Jacobs.
Highland Park, Rochester, Monroe Co., southwestern N. Y.—William L. G. Edson.
Reaboro, Victoria Co., central southern Ont.—E. W. Calvert.

Mississippi Valley.

Concordia, Lafayette Co., central western Mo.—Dr. Ferdinand Schreimann.
Washington Park, Springfield, Sangamon Co., central Ill.—Frances S. Davidson.
Iowa City, Johnson Co., central eastern Iowa.—R. W. Wales.
Zuma Twp., Rock Island Co., northwestern Ill.—J. J. Schafer.
Rockford, Winnebago Co., central northern Ill.—Norman E. Nelson.
Atlantic, Cass Co., southwestern Iowa.—Thos. H. Whitney.
Lauderdale Lakes, Walworth Co., southeastern Wis.—Lula Dunbar.
Viroqua, Vernon Co., southwestern Wis.—Raymond Spellum.
Milwaukee, Milwaukee Co., southeastern Wis.—Mrs. Mark L. Simpson.

Mississippi Valley, continued.

Madison, Dane Co., central southern Wis.—A. W. Schorger.
 Reedsburg, Sauk Co., central southern Wis.—Ethel A. Nott.
 Newberry, Luce Co., northeastern Mich.—Ralph Beebe.
 Lennox, Lincoln Co., southeastern S. D.—W. B. Mallory.
 Fargo, Cass Co., southeastern N. D.—O. A. Stevens.

CHIMNEY SWIFT

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Berwyn, Pa.....	April 22	1	April 27		April 28
Andover, N. J.....	April 26	4-5	April 28	4-5	April 28
Bernardsville, N. J.....	May 4	8	May 5	1	May 4
Port Chester, N. Y.....	April 27	2	April 30	10	May 3
New Haven, Conn., and vic.	May 1*		May 4	12	May 8
Orient, L. I., N. Y.....	May 15	3	May 17	1	not common
Waterbury, Conn.....	May 5	1	May 7	5	May 9
Providence, R. I., and vic...	May 3	4	May 6	8	May 9
Cambridge, Mass., and vic..	May 4	2			May 6
Bournedale, Mass.....	May 11	2	May 15	3	May 17
Kittery Point, Me.....	An early individual		April 21	by M. P. Baker.	
Norway, Me.....	May 7	25	May 8	countless	May 7
Milton, N. S.....	May 18	common			May 18
Antigonish, N. S.....	May 22	2	May 23	2	May 25
<i>Hudson and Champlain Valleys</i>					
Hyde Park, N. Y.....	April 23	4	April 24	12	April 26
Rhinebeck, N. Y.....	May 2	4	May 3	6	May 8
Clarendon, Vt.....	May 8	1	May 10	2	May 17
St. Albans, Vt.....	May 19	3	May 20	6	May 21
<i>Ohio Valley.</i>					
Urbana, Ill.....	April 21	2	April 28	4	May 4
Marco, Ind.....	April 18	1	April 22	6	April 25
Huron, Ohio.....	April 18	1	April 19	1	April 26
Detroit, Mich.....	May 3	1			rare here
Pittsburgh, Pa., and vic....	April 25	6	April 26	5	April 26
Southwestern New York....	April 30	9	May 1	9	May 10
Reaboro, Ont.....	May 4	1	May 5	2	May 10
<i>Mississippi Valley.</i>					
Concordia, Mo.....	April 18	1	April 19	7	April 24
Wash. Park., Springfield, Ill.	May 24	5	May 26	7	(?)
Iowa City, Iowa.....	April 17	1	April 23	2	April 29
Zuma Twp., Rock I. Co., Ill.	April 29	2	April 30	2	May 2
Rockford, Ill.....	April 18	1	April 26	10	April 27
Atlantic, Iowa.....	April 23	10	April 26	5	May 1
Lauderdale Lakes, Wis.....	May 3	8	May 4	3	May 3
Viroqua, Wis.....	April 27	3	May 1	16	May 1
Milwaukee, Wis.....	May 5	3	May 6	7	May 6
Madison, Wis.....	April 27	3	April 28	14	April 28
Reedsburg, Wis.....	April 14	7-8	May 13	6	May 15
Newberry, Mich.....	May 18	6	May 19	4	May 20
Lincoln Co., S. D.....	No record				
Fargo, N. D.....	May 15	1	May 16	4	May 20

* By Dr. L. B. Bishop.

HOUSE WREN

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Berwyn, Pa.....	April 22	1	April 23		April 28
Andover, N. J.....	April 29	1	April 30	2	May 1
Bernardsville, N. J.....	May 7	3	May 8	1	May 8
Port Chester, N. Y.....	April 24	1	April 25	2	May 1
New Haven, Conn., and vic.	May 4	1	May 5	1	May 7
Orient, L. I., N. Y.....	May 4	1	very rare and irregular trans.		
Waterbury, Conn.....	May 4	1	May 7	2	May 9
Providence, R. I., and vic..	May 16	2			rare
Cambridge, Mass., and vic..	May 16	1	May 17	3	May 17
Bournedale, Mass.....	not seen				
Norway, Me.....	Seen only in 1911				
Nova Scotia.....	Accidental				
<i>Hudson and Champlain Valleys</i>					
Hyde Park, N. Y.....	May 4	1	May 6	3	May 8
Rhinebeck, N. Y.....	May 2	3	May 3	5	May 4
Clarendon, Vt.....	None seen				
St. Albans, Vt.....	None; some seasons		one or two		
<i>Ohio Valley.</i>					
Urbana, Ill.....	April 18	1	April 23	1	April 26
Marco, Ind.....	April 21	2	April 22	2	
Have seen House Wrens here but three times.					
Huron, Ohio.....	April 20	1	April 23	1	April 26
Detroit, Mich.....	April 26	3	April 27	3	May 2
Pittsburgh, Pa., and vicinity	April 21	1	April 22	4	April 23
Southwestern New York....	April 28	3	April 30	3	May 6
Reaboro, Ont.....	May 3	1	May 10	1	May 24
<i>Mississippi Valley.</i>					
Concordia, Mo.....	April 23	1	April 26	2	April 29
Wash. Park, Springfield, Ill.	April 22	1	April 23	2	April 28
Iowa City, Iowa.....	April 19	2	April 20	2	April 23
Zuma Twp., Rock I. Co., Ill.	April 25	1	April 26	6	April 26
Rockford, Ill.....	April 26	3	April 27	1	April 29
Atlantic, Iowa.....	April 26	1	April 27	1	May 1
Lauderdale Lakes, Wis.....	May 1	1	May 13	1	
Breeds regularly but never common					
Viroqua, Wis.....	April 6	1	April 8	1	April 20
Milwaukee, Wis.....	April 27	2	April 29	3	May 2
Madison, Wis.....	April 27	1	April 28	1	May 7
Reedsburg, Wis.....	April 26	2	May 1	1	May 4
Newberry, Mich.....	May 15	1	May 16	1	May 18
Lincoln Co., S. D.....	May 4	50	May 5	50	May 4
Fargo, N. D.....	May 17	1	May 18	1	May 20

BALTIMORE ORIOLE

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District.</i>					
Berwyn, Pa.....	May 6	1	May 7		May 9
Andover, N. J.....	May 2	1	May 3	1	May 5
Bernardsville, N. J.....	May 4	2	May 7	2	May 13
Port Chester, N. Y.....	April 27	1	April 28	1	May 8

BALTIMORE ORIOLE, continued

	First seen	Number	Next seen	Number	Becomes common
<i>Atlantic Coast District, continued.</i>					
New Haven, Conn., and vic.	May 5	6	May 6	2	May 8
Orient, L. I., N. Y.....	May 4	1	May 11	3	May 14
Waterbury, Conn.....	May 8	3	May 10		May 10
Providence, R. I., and vic.	May 7	3-4	May 8	4	May 10
Cambridge, Mass., and vic..	May 8	1	May 9	4	May 10
Bournedale, Mass.....	May 11	1	May 13	1	May 16
Norway, Me.....	May 5	1	May 7	a pair	May 10
Nova Scotia.....	Accidental				
<i>Hudson and Champlain Valleys</i>					
Hyde Park, N. Y.....	May 4	2	May 5	8	May 6
Rhinebeck, N. Y.....	May 4	2	May 6	1	May 10
Clarendon, Vt.....	May 15	1	May 17	1	May 18
St. Albans, Vt.....	May 12	1	May 13	1	May 18
<i>Ohio Valley.</i>					
Urbana, Ill.....	April 23	1	April 25	1	May 5
Marco, Ind.....	April 25	1	May 6	4	Only two pairs breed
Huron, Ohio.....	April 20	2	May 1	1	May 3
Detroit, Mich.....	May 1	11	May 2*	common	May 2
Pittsburgh, Pa., and vicinity	April 27	1	April 28	2	April 30
Southwestern New York...	April 30	1	May 1	2	May 10
Reaboro, Ont.....	May 6	1	May 7	1	May 21
<i>Mississippi Valley.</i>					
Concordia, Mo.....	April 22	1	April 28	2	May 2
Wash. Park, Springfield, Ill.	April 24	2	April 26	1	April 27
Iowa City, Iowa.....	May 3	1	May 4	2	May 5
Zuma Twp., Rock I. Co., Ill.	April 27	1	April 28	1	May 3
Rockford, Ill.....	May 3	5	May 4	6	May 6
Atlantic, Iowa.....	(?)				May 10
Lauderdale Lakes, Wis.....	April 27	2	April 28	4	May 1
Viroqua, Wis.....	May 4	5	May 5	22	May 4
Milwaukee, Wis.....	May 2	1	May 4	5	May 5
Madison, Wis.....	May 1	1	May 2	1	May 6
Reedsburg, Wis.....	May 3	1	May 4	6	May 10
Newberry, Mich.....	May 21	1			rare
Lincoln Co., S. D.....	May 3	1	May 4	1	May 15
Fargo, N. D.....	May 16	2	May 17	several	May 17

Notes from Field and Study

The Annual Bird-List of the Massachusetts Audubon Society

Many members of the Massachusetts Audubon Society made a careful study of Massachusetts birds during the year 1913 and reported upon the check-lists. The observer seeing and recording the largest number of species was Miss Annie W. Cobb, 30 Massachusetts Avenue, Arlington, who reports 197. Nearest her, on the list, is Anna Kingman Barry, 5 Bowdoin Avenue, Dorchester, with 169. Royal E. Robbins, 61 Monmouth Street, Brookline, follows with 127; Mrs. George W. Kaan, 162 Aspinwall Avenue, Brookline, 111; Helen W. Kaan of the same address, 92, and Eleanor E. Barry, 91 Hillside Avenue, Melrose, 87. Edwin H. Merrill, 33 Walnut Street, Winchendon, reports 32, but it is interesting to note that these were all seen within the limits of Winchendon. Quite a number of birds not common in Massachusetts are reported by these observers. A Hooded Warbler—a male in full breeding plumage—was seen for a number of days on Boston Common in October by several observers. Acadian Chickadees were noted by several, and also Cape May Warblers. The Blue-gray Gnatcatcher and the Mockingbird were also seen. The blanks for these lists are supplied free by the Massachusetts Audubon Society.—WINTHROP PACKARD, Secretary-Treasurer.

Birds and Windows

I

In the May-June BIRD-LORE is an account of the curious actions of a Robin flying repeatedly against windows. Nearly all questions relating to natural history have an answer—it is merely a question of searching out the right one.

The same thing occurred here in the early nesting-season, and I am satisfied as to the solution of the problem.

On numerous occasions I have seen Tree Sparrows, Chickadees, etc., which feed in the yard in wintertime, fly against the windows with such force as to stun themselves. One bird I picked up dead beneath a plate-glass window.

This is liable to occur if birds become suddenly alarmed for in the window there is reflected more or less clearly, according to the quality of the glass, sky, trees, fields, etc., which to the bird seems an avenue of escape. Now the Robins in question were not trying to break into the house or escape to Elysian fields, but fighting their own reflections which they supposed to be determined rivals. The window here was fixed so that it ceased to act as a reflector and the battle ceased. I remember a pet Mockingbird that used to race back and forth on the mantelpiece and scold at his reflection in a mirror for half an hour at a time.—W. L. SKINNER, Proctorsville, Vt.

II

In reply to Mr. Clarence B. Wood's query in the May-June issue of BIRD-LORE, I would say that a very short time ago I saw a male Cardinal act almost exactly as did his Robin.

In a trumpet vine on the side of my home, over three stories high, was located a Cardinal's nest (rather an unusual site for a Cardinal). The female had been incubating for some time when the nest was discovered, and the male was observed in and about the vine at all hours. One evening in the last week of May while at work in the garden, my attention was attracted by many excited hissing chirps, followed by some object continually striking the glass of a small garret window some three or four feet from, and slightly below, the nest.

Upon examination it proved to be the male Cardinal who for some seemingly unknown cause was flying continually with considerable force against the glass

panes. Some of his attacks were repeated with such force that many times he fell panting and almost exhausted to the narrow sill of the window, only to hop back into the vine and renew his attacks. The eggs must have hatched. The parent bird was now exceedingly watchful to guard the young from any lurking dangers, and had seen reflected in the panes of glass, as a result of the dark background within, his own image. Mistaking it for a foraging male of his own species, he had decided to drive it from the vicinity of the nest. After falling to the sill, as the result of an attack, the bird would hop to the vine directly in front of the window, and, seeing his image again reflected in the glass, would renew the attack.

Satisfied now that this was the cause of the curious actions of the bird, I decided to confirm my theory. Going directly to the garret I opened the window, knowing that if the above suppositions were the case that this would be the quickest way to end the trouble; while if the bird really wanted to get inside for some reason or other it would have all the chance in the world to do so. Before leaving the spot I reached up and felt in the nest and, just as I had supposed, the young were hatched. It might be here stated that while at the window arranging things, the male bird was nowhere to be seen.

Returning to the garden, I awaited results, and after a short while the male bird returned and, flying to the top of the vine began to descend by dropping down a few inches at a time, until he was again directly in front of the window. Here he stopped and peered in, seeming not a little surprised at there being no adversary there to meet him. After sitting in this position for a moment or two, all the while nervously twitching his tail and uttering low, discontented chirps, he flew directly to the sill where after an instant's pause and investigation, he flew back into the vine, then to some nearby shrubbery, and the incident was ended.

Could not Mr. Wood's Robin have had a nest in the vicinity and, as in the case of the Cardinal, desired to keep away all

stragglers intruders of its own kind?—
DELOS E. CULVER, *Addingham, Pa.*

Fall River Notes

As you are getting in observations on earliest arrivals of birds, I think the following item which appeared in our Fall River paper may be of interest.

As you undoubtedly know there is quite a colony of Fish Hawks on the shores and inlets of Narragansett Bay, near Swansea and Touisset. An observer in that neighborhood, who has observed them for many years, sent word to the paper that year after year they had arrived there on the morning of March 24. This year he sent word that they arrived March 24, at 8.40 P.M., twenty minutes late; their usual time being 8.20!

I should also like to add that the Evening Grosbeaks have visited us again this year, but instead of fourteen there were only two, neither of them in perfect color. They have been here to our knowledge only three times and making very short visits—a half hour or so. The fruit of the box elder tree, of which they were so fond before, was all on the ground, and they paid no attention to it. They were here in March. A friend saw a pair in February, about a half mile from our home.—ELLEN M. SHOVE, *Fall River, Mass.*

Prospect Park Notes

I wish to report the presence of a male Cardinal in Prospect Park, Brooklyn. As far as I can learn this the first record since 1902. According to Braislin's 'Birds of Long Island,' the Cardinal was formerly common in this section and bred in Prospect Park in 1884. It is now very rare here. The bird was seen by me on May 2, 1914, on the large peninsula near the lake. A few days later it was observed by Miss Kumpf of the Brooklyn Bird Club.

There was a rather unusual migratory wave on May 2, which brought many Warblers before their usual time. A male Cape May on that date seems to be an early record. At the same time five Brown

Creepers were observed, a rather large number for so late in the season.—
EDWARD FLEISCHER, *Brooklyn, N. Y.*

Bird-Notes from Sedalia, Mo.

Birds seem unusually plentiful in Sedalia this spring. In a drive fourteen or fifteen blocks from the business streets of a city of twenty-five thousand one may see Bluebirds, Robins, Mourning Doves, Brown Thrashers, Bronzed Grackles, Meadowlarks, Baltimore Orioles, Red-headed Woodpeckers, perhaps a House Wren, and Flickers.

There are many trees along the residence streets that furnish nesting-places for all these, except the Meadowlarks that nest in the outlying vacant prairie lots. In the back yards, where cats are not too plentiful, and where the copse is sufficiently thick and secluded, the Brown Thrasher has his nest.

In my own yard are several soft maples; in one of these having a stump at the top, a flicker has made his nesting-place and has worked persistently for nearly two weeks now to fashion a house for the brood to come. The female seemed to do all the work, commencing early in the morning and working until the warm hours of noon. In the afternoon she was again at work making the chips fly until about six o'clock. From appearances the hole is about finished. The male occasionally visits the scene of activity but takes no part.

About three feet from the Flicker hole a pair of English Sparrows have piled up one of the conglomerations they use as nests.

These near neighbors seem to agree fairly well and get along with some hard language and quite a bit of scolding.

About forty feet from the Flicker tree is another maple; on this I put up a piece of fence-post with a hole made in it with auger and chisel, thinking I could perhaps have a family of Bluebirds. I was rewarded by a pair selecting it for a nesting-place in spite of the numerous English Sparrows. The Bluebirds are valiant

fighters and seem always in eye-shot ready to give battle to any intruder. The Sparrows do not seem to care for that particular nesting-place, and I can not determine whether it be a case of sour grapes or whether the hole is not sufficiently large for their liking.

In the same tree with the Bluebirds, but higher up is another Sparrow's nest; a kind of an apartment house.

I had hoped for a Robin's nest but so far none have built on my grounds. A couple of House Wrens stayed a few days and a box furnished for them was scorned.

Many interesting moments that I can spare are spent watching the little home-makers in a busy city.—CHAS. A. MCNEIL, M. D., *Sedalia, Mo.*

Sussex County, N. J., Notes

We notice, in your introductory notes to the Christmas census, the statement that Pine Grosbeaks, Redpolls, and Crossbills have not come farther south than New England.

We sent no Christmas list, but it may interest you to know that a flock of twenty-five Pine Grosbeaks came to us on January 9. Only one male in full red coloring was among them. The others were females and young males. The flock visited our maple trees almost daily until about the middle of February, when the extreme cold and the big storms seemed to break up the flock into smaller groups. We saw them in various places throughout the town until March 20, when the last one disappeared.

A flock of about a dozen Redpolls fed on a row of tamarack trees in our driveway from February 22 till March 1. During a heavy snowstorm one venturesome fellow appeared at the window where some Chickadees were feeding.

On March 1, ten American Crossbills, came to a small spruce tree about twenty-five feet from our house, and industriously and systematically exhausted the seeds from a small crop of cones in the top of the tree.

What we consider our most wonderful

observation for the year was a Mockingbird which perched on a vine just beneath our window for some little time, giving us opportunity to make a positive identification. This was on December 14, 1913. On March 3, during the big storm, it appeared again, but we have not seen it since. We believe this is the first record of a Mockingbird for Sussex County, although the members of our nature-study club have kept an accurate list for a number of years.—F. BLANCHE HILL, *Andover, Sussex Co., N. J.*



PARASITIC JAEGER

Notes on the Autumn Migration of the Parasitic Jaeger

During an Atlantic cruise in the New Bedford whaling brig *Daisy* I made the following notes concerning Jaegers (*Stercorarius parasiticus*), on their autumn migration.

September 23, 1912, latitude $12^{\circ} 46' N.$, longitude $25^{\circ} 05' W.$ (about 100 miles south of the Cape Verde Islands). Two Jaegers seen, of which one was collected.

The specimen is a male of the dark phase, and in fresh plumage.

September 27, 1912, latitude $10^{\circ} 46' N.$, longitude $24^{\circ} 38' W.$ Calm, with heavy ground-swell. One Jaeger seen and collected, a uniformly dark female, fully adult, with slightly worn central rectrices.

October 3, 1912, latitude $6^{\circ} 46' N.$, longitude $24^{\circ} 35' W.$ Two Jaegers of the dark phase seen together.

October 20, 1912, latitude $10^{\circ} 21' S.$, longitude $34^{\circ} 04' W.$ (off the coast of southern Pernambuco). Three Jaegers were noted. A pair of them tagged after the *Daisy* from nine o'clock in the morning until four in the afternoon. One was of the dark phase, the other white-breasted. Both had short central rectrices, differing in this respect from the birds noted north of the equator a month earlier. The two would fly up our wake with slow wingbeats, hover for a moment over the stern of the brig, then glide slowly to the windward side and settle on the water, where they would tuck their long wings into the resting position and float high and gracefully. When the ship had left them a few hundred yards astern, they would rise and overtake us, and again drop down. This was repeated monotonously for seven hours. The white-breasted bird, whose photograph is here reproduced, was bolder than its mate, and regularly flew nearer to the ship. Occasionally the two were seen to pick up food, including scraps of pork fat which I threw overboard. They did not seem to molest the Petrels (*Oceanites oceanicus*) which followed us in numbers.

October 26, 1912, latitude $21^{\circ} 40' S.$, longitude $34^{\circ} 12' W.$ Two Jaegers seen separately. One which accompanied us for a short while appeared to chase some of the *Oceanites* (Petrels), although I could not be certain that it was trying to rob them.

October 28, 1912, latitude $23^{\circ} S.$, longitude $35^{\circ} 45' W.$ (on the verge of the south temperate zone). One Jaeger seen.—ROBERT CUSHMAN MURPHY, *Brooklyn Institute of Arts and Sciences.*

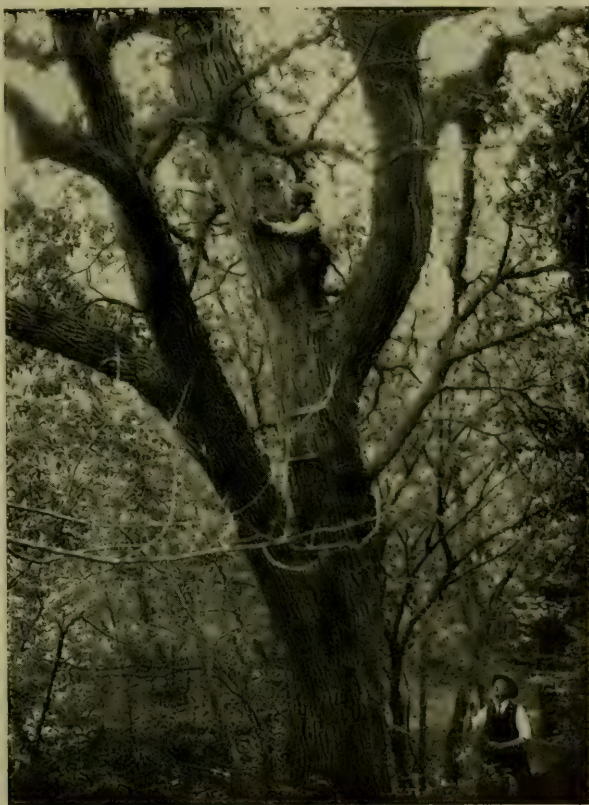
Turkey Vultures in Northwestern Iowa

A few years ago, when a resident of Sioux City, Iowa, I had an interesting experience with Turkey Vultures. One day, with a companion, I was roaming through a ravine on the outskirts of the city, when, from the top of an enormous elm, a large bird rose and flew upward to a great height, where it continued circling and soaring, on motionless pinions, an aviator of marvelous skill.

It was plainly not an Eagle. But what could it be? Not until I got my binoculars focused upon it, and could distinguish the naked, red head, did I recognize it as a Turkey Vulture, or 'Buzzard.' The persistency with which the bird hung about caused me to suspect a nest. I resolved to investigate. But how should I get into the tree? The huge elm must have been fully fifteen feet in circumference. Up beyond the lower limbs a few decayed cleats, utterly unsafe, showed where someone had once made the ascent. I solved the difficulty by procuring a stout rope at the nearest farmhouse. After a number of unsuccessful throws, I succeeded in getting the rope over the lowest limb. Then up I went, hand over hand. The operation was repeated until the limbs were reached that were near enough for climbing. At the very top there was the hollow, dead shell of the main trunk; and, in this, upon the bare, decayed wood, two eggs as large as Turkey eggs. They were of a dirty white color, heavily blotched with brown,

amber and lilac, especially about the larger end. One was larger than the other. This was on May 15.

Two weeks later, in company with Prof. T. C. Stephens, of Morningside College, and Dr. Guy C. Rich, both ornithologists of note in that section, I again visited the nest and Professor Stephens photographed the nesting-site and the eggs. Twenty-



SITE OF A TURKEY VULTURE'S NEST
Photographed by T. C. Stephens

three days later I again visited the locality and climbed to the nest. This time the parent bird did not fly. I suspected the cause. Not until I actually put my hand upon her did she leave her post. In place of the eggs, there were two snow-white little fellows, fat as butter-balls, covered with fuzzy down. They smelled atrociously, however, for the parent bird

feeds the young on regurgitated carrion. A dead cow, nearby, just ripe to the Vulture taste, indicated an inexhaustible food-supply.



YOUNG TURKEY VULTURE IN NEST-LOG

It is rare to find a Vulture nesting so far north, and no ornithologist in that section had ever before observed such an occurrence. I have noted these birds soaring above the forests in northern Minnesota, but it may be that they did not nest there, though the inference would be that they did. Can anyone supply information in regard to this point?

It is such adventures as this, unexpectedly coming into one's life, that give to the study of ornithology in the field its peculiar charm, and explain why the study of birds, once entered upon, becomes an ever-increasing delight. —REV. MANLEY B. TOWNSEND, *Nashua, N. H.* (Photograph by Prof. T. C. Stephens, Sioux City, Iowa).

Young Turkey Vultures

I am sending you two pictures of young Turkey Vultures which I photographed under rather novel circumstances. After taking them on the fallen tree, they took fright and ran into the hollow log, which was their nest. Determining the location of the nest I focused my camera at ten feet and placed it in the hollow log. I then ignited a flashlight behind and slightly above the camera. Thinking the unusual way in which this picture was taken, as well as the resulting view of the birds, might interest you I am sending them, hoping you may find them available for



TWO YOUNG TURKEY VULTURES

reproduction in your magazine.—WM. F. GINGRICH, *Chicago, Ill.*

Red-breasted Grosbeak Singing on the Nest

Florida Gallinule at Baltimore

On the morning of June 9, 1914, one of my neighbors who knows my interest in birds, told me that a very peculiar bird had flown into his place of business in the central portion of Baltimore City two nights before and that he still had the bird in the yard back of his place. He described it as having a head like that of a pigeon and being black in color. Knowing how inaccurate are the observations of those not particularly interested in birds, I expected to find a Crow or something equally commonplace.

I went with him to his store and in the brick-paved yard saw what I knew at once to be a wading bird, because of its long legs and wide spreading feet. Beyond this, however, I had to admit myself stumped. I took a memorandum of the bird's characteristics, and the long green legs, with a bright red band around the tibiae, made it very easy to identify the Florida Gallinule. I observe in Chapman's 'Handbook' that this bird is reported from the District of Columbia as a migrant only. Its appearance in June would seem to indicate that it is breeding in the marshes near Baltimore. In this connection I may say that the nearest marshy ground to the place where this Gallinule was taken is distant about two miles. There have been no very high winds for the past week or so, and it is certainly surprising that the bird should have flown into a window in the city.

It has frequently been remarked that all wild animal stories have a sad ending and this one is no exception. I suggested to my friend that he have the bird taken to the outskirts of the city and liberated near the water-front, or else that he send it to the Zoo in Druid Hill Park. He thought both of these were good suggestions and therefore adopted neither. The next day he told me that the bird had died, doubtless of starvation.—JOSEPH N. ULMAN, *Baltimore, Md.*

In many nature-study books I have noted a discussion as to whether the adult bird ever sings while sitting on the nest. In 1912 I located a Rose-breasted Grosbeak's nest a few feet up in a tree on a boulevard. I watched it closely and saw the male incubating. While watching him he voiced a few of those indescribable notes of his exquisite song. It was not long until he discovered me and hopped off the nest. —HARRY C. PIFER, *Lovington, Ill.*

Our Neighbor, the Bald Eagle

One of my earliest recollections is of the sight of a Bald Eagle scaling from the hills behind my home to the sea before it. My aunt, who at the age of ninety-four has a better memory than many young people, says that they were here in her childhood just as now, and of course it is impossible to tell for how many years these birds (or their ancestors) have nested in these wooded hills.

Some years ago the nest, a huge platform of rough sticks and twigs, was located in an old pine which has since blown down. Another was constructed, also in an old pine, which I think still does duty as a home.

We usually see but one bird at a time, never more than two, except once, when two old birds and two young were seen going down to the sea together. The young with dark head and tail, are sometimes seen alone and are commonly called "Black Eagles."

At one time, some years ago, one of the Eagles disappeared and for several years the bereaved one led a solitary life in the pine tree. Then I think that it, too, must have met with some mishap, as later a pair appeared and are still living here.

It seems strange that there are not more nesting here, where they have been undisturbed for so many years, but doubtless this is due to their solitary habits.

Sometimes we see them, a mere speck on the sky, and sometimes they hang low

so that they may be plainly seen, tipping slightly as the wind varies, with the extreme tips of the wings fanning gently, but otherwise apparently motionless.

When the magnificent birds fail to appear for a week or two we miss them and feel that a very important feature is lacking in our view. Their graceful flight, like that of our Sea Gulls, adds a charm to the landscape impossible to describe.—WINIFRED HOLWAY PALMER, *Machias, Maine.*

The Flocking of Purple Martins

On September 2d, 3rd, and 4th, and to a less extent until the 15th, large numbers of Martins gathered on the telephone wires on Park Place between Farwell and Frederick Avenues, Milwaukee. They kept on the wing till about 5:30 and then began to settle on the wires. Occasionally the whole company would leave the wires, almost together, then settle down again. They seemed to wish to get close together, and many gathered on the house-tops and trees in the neighborhood of the middle of the flock. At about 6.30 they left as with one accord. The only night that the writer caught them in the act of leaving they

disappeared to the northwest. They were reported to gather in a similar way in the morning, though the writer did not have the pleasure of seeing them at that time. The accompanying photograph was taken September 4th, at 6 p.m. A careful estimate indicated that there were 13,440 Martins on the wires alone. Examination made it clear that there were no other Swallows in the company—all were Purple Martins.—I. N. MITCHELL, *Milwaukee, Wis.*

Harris's Sparrow in Wisconsin

In the May-June number of "BIRD-LORE, I was much interested to read the report of Harris's Sparrow from Illinois, since this rare visitant was also seen in Milwaukee this year.

On May 12, while watching a flock of fifteen or twenty White-throated Sparrows, the attention of Mr. Simpson and myself was attracted by a 'black-faced,' unfamiliar Sparrow, that seemed so much larger than any of his companions, as well as most unusual in appearance.

We followed and watched the bird for a long time, getting within ten feet of him, as he fed busily on the ground. We



ABOUT 13,000 PURPLE MARTINS IN MILWAUKEE

noted every detail of its unusual, really striking markings. On reaching home, we readily identified our new bird by the excellent plate in the series of 'Migration of North American Sparrows' in BIRD-LORE, as well as from the description in Chapman's 'Birds of Eastern North America.'

The bird was seen the following day by Mrs. John Hill, in about the same section of Lake Park, again with a flock of White-throated Sparrows.

Harris's Sparrow seems to me to be, in shape, in size and in the manner of holding up its head, more like the White-crowned Sparrow than any other member of the Sparrow family.—MRS. MARK L. SIMPSON, 1340 Grand Ave., Milwaukee, Wis.

Additional Observations of Harris's Sparrow in Illinois

Since writing my report of the first observation of Harris's Sparrow here, and which was published in the last number of BIRD-LORE, I have observed the same species at the hedge-fence where the first one was seen, on the following named dates:

April 26, one was seen on a willow tree in the slough at the east end of the fence.

May 3, two were seen at the east end of the fence.

May 5, one was seen at the west end of the fence, and May 7, the last one was seen at the same place.

The first and last ones observed had the most brilliant plumage, and were evidently adult birds. In the slough near the hedge there is always water during the spring, and this is probably the reason they came there.—J. J. SCHAFER, Port Byron, Ill.

A Rat in a Swallow's Nest

In deepening the channel in the stream that connects Lakes Monona and Waubesa, near Madison, Wisconsin, the dredges have formed many sandbanks from one to ten feet in height. Many Bank Swallows and a few Rough-wings have been quick to take advantage of the opportunity, and several colonies have located their burrows along the water-course, some within a few

feet of the water. While canoeing between the lakes with Mr. A. W. Schorger, on May 29, we stopped to examine some of the burrows. The first hole inspected proved to be straight enough to allow a ray of reflected light to reach the end, which was about two or two and a half feet from the entrance. Instead of the expected Swallow or eggs, we discovered a rat curled up very comfortably for an afternoon siesta—very probably an after-dinner nap! He managed to escape from the first attempt on his life and swam under water for about twenty feet. He was finally overtaken and consigned to a watery grave. From the rat's point of view, it was an ideal summer resort; a good meal (presumably) and a comfortable room available every few feet along the water-front.—NORMAN DEW. BETTS, Madison, Wis.

Brewster's Warbler Seen at Highland Park, Rochester, N. Y.

On May 2, 1914, a Warbler was observed in Warner's Woods about 9.30 A.M.; again between 11.20 and 12 M.

The bird was closely studied, and the following notes taken: a Warbler about five inches long; had a large, almost square patch of bright yellow on the wing near the shoulder, a black line through the eye, and a black bill. The tail grayish slate, grading to grayish yellow-green on the back and slightly darker on the head. Underparts light gray tinged with yellow. The bird was approached within twenty feet in open woods and shrubs with the bright sun of a clear day shining over our shoulders on the bird. Mr. Edson carries a Bausch & Lomb Zeiss prism stereo six power glass and Mr. Horsey a good field-glass. We are, therefore, very positive of the above points.

Brewster's Warbler is the nearest bird described in 'Warblers of North America' by Chapman, and it is said to show yellow on the underparts intergrading with the Blue-winged Warbler.—WM. L. G. EDSON, RICHARD E. HORSEY, 12 Fairview Ave., Rochester, N. Y.

Book News and Reviews

THE RED-WINGED BLACKBIRD. A Study in the Ecology of a Cat-tail Marsh. By ARTHUR A. ALLEN, Zoölogical Laboratory, Cornell University. Abstract Proc. Linn. Soc. N. Y. [care of Am. Mus. Nat. Hist.] Nos. 24, 25, 1914, pp. 43-128; pls. 20; figs. 2.

In this admirable monograph Dr. Allen has not only given us much new information concerning the habits of the Red-winged Blackbird, but also a demonstration of methods in the study of birds in nature which forms an object lesson we cannot too strongly commend to the field student.

BIRD-LORE has long advocated specialization as a means of extending the boundaries of the known and of deepening one's interests. Here then, is a model which, we gladly confess, represents a distinct advance over anything we had in mind.

Ornithologists have been too prone to flock by themselves. Their studies have been apt to consider the bird apart from its environment—as that term implies not alone climatic and physiographic factors, but all the other forms of life with which directly or indirectly it may come in contact. While such studies may be above criticism by ornithologists, they are far from filling the demands of the ecologist. That is, of one who studies the relationships of organisms to one another and to their surroundings.

Dr. Allen's paper is a contribution to this newer, broader type of ornithology. It opens with a study of environment. The "plant associations" with their characteristic animals are outlined, and the changes due to seasonal or other causes mentioned.

This generalized survey of a particular area lays the foundation for the more specialized study of any of the forms of life which inhabit it, whether plant, fish, reptile, bird, or mammal. From its fauna Dr. Allen selects as his subject the Red-winged Blackbird, and Part II of his

paper (pp. 74-128) is devoted to an ecological study of this bird as it was observed in and near Renwick Marsh at the head of Cayuga Lake, New York.

Beginning with the Redwing's migration, some conception of the intensiveness of Dr. Allen's studies may be gained by the following table. Doubtless few birds have been more generally recorded in migration than this conspicuous species, but where else will we find such detailed, intimate information in regard to its movements?

I. Vagrants. Feb. 25, March 4.

II. Migrant adult males. March 13-April 21.

III. Resident adult males. March 25-April 10.

IV. Migrant females and immature males. March 29-April 24.

V. Resident adult females. April 10-May 1.

VI. Resident immature males. May 6-June 1 (1910).

VII. Resident immature females. May 10-June 11 (1910).

With these dates is presented much correlative matter in regard to the development of vegetation, changes in food-supply, variations in actions, sexual growth, etc., all of which is designed to show the relation of cause and effect. Consequently, we have a contribution not alone to ornithology but to general biology—or better, to bionomics.

'Mating and Song,' 'Nesting,' 'The Young,' 'Fall Migration,' 'Enemies,' 'Molt and Plumage,' 'Food and Food-supply,' 'Correlations Between Changes of Food and Changes in Structure of Stomach,' 'Correlations in the Changes Occurring in the Reproductive Organs,' are the further headings under which Dr. Allen presents the results of his studies of the Redwing. Each contains something more or less original in matter and in method; and each contributes to what, in our opinion, is the best, most significant biography

which has thus far been prepared of any American bird.

BIRD-LORE'S readers do not have to be assured of Dr. Allen's success as a bird photographer, and the thirty-odd photographs illustrating this article bear witness both to his skill with a camera and good judgment in the selection of subjects.—F. M. C.

AN ACCOUNT OF THE MAMMALS AND BIRDS OF THE LOWER COLORADO RIVER, WITH ESPECIAL REFERENCE TO THE DISTRIBUTIONAL PROBLEMS PRESENTED. By JOSEPH GRINNELL, Univ. of Calif. Pub. in Zoöl. Vol. 12, No. 4, pp. 51-294; pls. 13; figs. 9.

The observations and specimens on which this paper is based were gathered by its author, Frank Stephens, Joseph Dixon, and L. Hollister Jones. Working with funds provided by Miss Annie M. Alexander, founder of the California Museum of Vertebrate Zoölogy, they began operations at the Needles on the Colorado River, on February 15, and reached Yuma May 3, and concluded their work a few miles farther south on May 15, 1910. Transportation was provided by a scow and a skiff, while the current supplied the motive power. Twenty-nine camps were made, some on the Arizona, some on the California side of the river. These served as bases from which the immediately surrounding country was explored.

Collections were made of birds, mammals, reptiles, amphibians, a few fishes, and the more conspicuous plants. No less important than the specimens themselves, and greatly increasing their value, are the observations made on the country traversed by the trained naturalists composing the party.

The results, as contained in this report on the birds and mammals secured, is therefore not merely a systematic treatise, but an important contribution to our knowledge of the manner of occurrence and habits of the species concerned, and particularly, as the title of the paper states, to the distributional problems presented.

It is this portion of the paper which makes it of value to the student of faunistics, whatever be the group of animals to which he devotes himself. We cannot at this time give to this paper the attention it deserves, but we may at least present Mr. Grinnell's

Classification of Barriers to Species as Regards Birds and Mammals

Barriers

A. Tangible (mechanical).

(a) Land to aquatic species.

(b) Bodies or streams of water to terrestrial species.

B. Intangible (non-mechanical).

(a) Zonal (by temperature).

(b) Faunal (by atmospheric humidity).

(c) Associational.

(1) By food-supply.

(2) By breeding-places.

(3) By temporary refuges.

(Each of these three with regard to the inherent structural characters of each species concerned).—F. M. C.

A DISTRIBUTIONAL LIST OF THE BIRDS OF ARIZONA. By HARRY S. SWARTH. Pacific Coast Avifauna, No. 10; Cooper Orn. Club, Hollywood, Calif. May 25, 1914. 133 pp., map. Price \$1.50.

To its noteworthy series of special publications on western birds the Cooper Club now adds this authoritative list of Arizona birds. It includes 362 species and subspecies which are classed as follows:

Resident.....	152
Summer Visitant.....	72
Winter Visitant.....	57
Transient.....	30
Of Casual Occurrence.....	51

In addition to the main annotated list (pp. 9-81), nominal lists of species are given under these seasonal headings, and there are also similar lists under faunal headings. A colored faunal map and a bibliography add to the value of this paper.—F. M. C.

The Ornithological Magazines

THE CONDOR.—The March 'Condor' is an unusually large number with its

fifty-four pages and seventeen illustrations. It contains five main articles, eighteen short notes, and five pages of editorials, reviews, and minutes of Cooper Club meetings.

The opening article of B. Dixon on a 'History of a Pair of Pacific Horned Owls' is well illustrated, and is based on a series of observations in the Escondido Valley, San Diego County, extending over a period of thirteen years. During this time the Owls nested three times in old Hawk's nests in trees, twice in a Hawk's or Raven's nest in a cliff, and at other times made their home on a rocky ledge. Five sets of three eggs were laid, but all the others contained but two eggs each. The dates of laying (completed sets) varied from Jan. 29, 1911, to Feb. 14, 1907.

Another Owl article appears under the title of 'An Asionine Ruse,' in which Dawson recounts briefly an experience in Washington with a Long-eared Owl that went through all the motions and cries attendant on capturing a Flicker or a mouse, apparently merely to decoy the intruder away from her nest.

In a short but very interesting article on 'Destruction of Birds in California by Fumigation of Trees,' A. B. Howell reports finding ninety-two dead birds, representing nine species, under two hundred trees, the morning after his orange grove at Covina had been fumigated. He suggests that a law imposing a fine of five cents for each bird killed might make fumigators more careful.

Among 'Some Discoveries in the Forest at Fyffe,' in El Dorado County, made during a ten days' stay in May, 1913, Ray describes and gives some very clear photographs of a nest of the rare Hermit Warbler and a family of young Saw-whet Owls, the latter constituting the first definite breeding record for this Owl in California.

A contribution on the 'Birds of Sitka and Vicinity, Southeastern Alaska,' by George Willets, contains careful notes on 152 species observed during the summers of 1912 and 1913 on Kruzof, St. Lazaria, Biorka, and other islands in or near Sitka Sound.

In a review of Grinnell's report on the 'Birds of the San Jacinto Area,' Dawson takes exception to the substitution of the term 'summer visitant' for 'summer resident.' "Am I," he asks, "only a 'winter visitant' at Santa Barbara, because I spend four months at home and eight, or thereabouts, afield. The state holds otherwise, and so does common sense."

The May number of 'The Condor' contains an unusually varied and interesting series of eight papers. The opening article is the presidential address of Harold C. Bryant on 'The Cooper Club Member and Scientific Work' delivered before the Northern Division of the Club on March 19. After briefly sketching the history of the Cooper Club, he divides the general work of the organization into eight groups: Collecting specimens; preparation of local lists, recording field observations, description of new species, photography, distribution, economic investigations and conservation of wild life, and adds the comment, "If there is anything in our work that we have possibly overdone, it is the plain faunal list."

Jewett's 'Bird Notes from Netarts Bay, Oregon,' including observations on fifty-seven species of water-birds and shore-birds, made in 1912 and 1913, and Saunders' 'Birds of Teton and Northern Lewis and Clark Counties, Montana' (182 species), are the only local lists in this number. Allan Brooks contributes two papers, one on 'The Races of *Brantha canadensis*' and the other entitled 'A Sadly Neglected Matter.' In the latter, he calls attention to the importance of noting the color of the bill, feet, and iris on the labels of all bird skins, and mentions several cases in which failure to record these facts has given rise to error in descriptions, or failure to differentiate properly forms which are closely related.

Thayer's account of the 'Nesting of the Kittlitz Murrelet' high up on the slopes of Pavloff Volcano, on the Alaskan Peninsula, is one of the most important facts recorded for some time. The eggs of this species, previously unknown, were discovered by Captain F. E. Klein-

schmidt, who secured three specimens (one broken) in May and June, 1913, and incidentally substantiated the Eskimo reports that the birds nested in the mountains. Possibly the closely related Marbled Murrelet may have similar habits, which will explain in part the failure thus far to discover its nesting-place.

Fayre Kenagy describes the 'Change in Fauna' on the Minidoka Project in South Central Idaho, and gives a table showing the fluctuation in numbers, during the last seven years, of nineteen species of birds, due to irrigation.

Under the caption 'Resident *versus* Visitant,' Dawson takes issue with the recent attempt to restrict the term 'resident' to species which remain in a locality throughout the year, declaring that "it is grossly inappropriate to call any breeding bird a 'visitant' in its breeding-home." Grinnell, in an editorial note, is equally positive that "Birds are either *resident* or *migratory*; if they migrate they can *not* be resident; hence such an incongruity as *winter resident* is impossible!"

In referring to the Annual Directory, which closes the number, it is interesting to remember that the Cooper Club was organized twenty-one years ago. Beginning with a membership of four, in June 1893, it has steadily increased until it now has six honorary and four hundred and thirty-three active members.—T. S. P.

WILSON BULLETIN.—The March number of this Quarterly (Vol. XXVI, No. 1) opens with an illustrated study of the Woodcock, by Gerard Alan Abbott; R. W. Shufeldt writes a somewhat rambling dissertation on Owls, accompanying it with two photographs and a reproduction of a painting of Snowy Owls by Gerhard Heilmann. Ira N. Gabrielson gives some interesting 'Pied-billed Grebe Notes,' in which he records seeing, on August 19, 1913, a flock containing about two hundred of these Grebes, which is twice as large a flock as the reviewer has noted. Ernest W. Vickers writes a graphic description of the roll or drumming of the Pileated Woodpecker, and Lynds

Jones discusses the bird-life of northern Ohio during the winter of 1913-14. Professor Jones also contributes 'A Brief History of the Wilson Ornithological Club,' which was organized on December 3, 1888. Elsewhere in this number of the Bulletin appear the minutes of the meeting of the Club held in Chicago on February 5 and 6, 1914. Heretofore the work of the Club and communication between its members has been conducted by correspondence. Henceforth it is proposed to hold regular meetings, and the evident success of the meeting seems fully to warrant the adoption of this plan.

Further articles in this number are by Geo. L. Fordyce, who writes on 'Changes in the Avifauna of Youngstown, Ohio,' incident to the building of reservoirs, which have added some 60 species to those observed by him in the preceding ten years, and a detailed review of Reichenow's 'Handbuch der Systematischen Ornithologie,' by W. F. Henninger. There are also editorials, field-notes, and reviews.—F. M. C.

Book News

THE National Geographic Magazine for May, 1914, makes a notable contribution to popular ornithology in an article by Henry W. Henshaw on 'Birds of Town and Country,' with 64 illustrations in color by Louis Agassiz Fuertes. This article, with a similar one by Mr. Henshaw in the issue of the same magazine for June, 1913, with 50 colored illustrations by Fuertes, a paper by F. H. Kennard on 'Encouraging Birds around the Home' and a study of certain phases of bird migration by Wells W. Cooke, has been bound in one volume. Copies may be obtained from the National Geographic Society, Washington, D. C., at one dollar each.

THE fourth part of Mr. Fuertes' 'Impressions of the Voices of Tropical Birds' will appear in the next issue of BIRD-LORE. This magazine has published few articles which have been more warmly commended than these graphic descriptions by Mr. Fuertes.

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

ON a preceding page of this issue of BIRD-LORE, Abbott H. Thayer discusses the question of the comparative number of our birds. This subject was brought before the last meeting of the American Ornithologists' Union, and it is interesting to observe that Mr. Thayer independently reaches the conclusions which were expressed by the members of the Union who took part in the discussion.

The lack of proper evidence and the worthlessness of opinions based on memory alone were admitted. Professor Munsterberg's letter to Mr. Thayer gives a psychologist's reasons why such testimony lacks value. To them may be added several which are more physiological. Three or four decades is apt to make a decided, if unacknowledged, difference in one's power to see and to hear birds, as well as to dull the keenness with which one searches for them. When neighbors tell us that Robins, or Orioles, or 'Chippies' are not so common as they were thirty years ago, we know that it is human-life rather than bird-life which is failing.

One, however, should avoid generalizing on observations covering only one locality. Following Mr. Thayer's statement that, on the whole, birds are as numerous about Keene, H. N., as they have been at any time in his experience, covering fifty years, we have the claim of Mr. Rolla Warren Kimsey that at Lathrop, Mo., birds are decreasing; and he gives evidently valid reasons for this decrease.

But, on a succeeding page (p. 277) of this number, another Missouri correspondent writes that birds "seem unusually plentiful in Sedalia this spring." From Saginaw, Michigan, Mr. W. B. Mershon reports that he has never seen more Baltimore Orioles than are present there this year, but that there are fewer Bluebirds than usual.

With this variety of statement about existing conditions, how can we hope to know exactly the conditions which existed say, thirty or forty years ago, in order that we may compare them with those of today. Few men are qualified by personal experience to make such comparison, but, so far as we are aware, those in a position to speak with authority detect, all in all, no marked change in the numbers of our song and insectivorous birds.

Mr. Joseph Grinnell, Director of the Museum of Vertebrate Zoölogy of the University of California, writes us that, in view of the proposal to legalize the marketing of all game in California, Dr. Walter P. Taylor has been detailed from the Museum's staff to conduct the campaign against this undesirable legislation. Mr. Grinnell so clearly expresses the duty to the state of professional zoölogists in crises of this kind that we take the liberty of quoting from his letter:

"In thus announcing our participation in active conservation, which of course means putting aside, for the time being, such other interests as field and museum research, I would urge that it is the duty of zoölogists to make their special knowledge available for the common good whenever the opportunity offers. By reason of our work in field and museum we have been privileged to acquaint ourselves intimately with the animal life of the state. This knowledge is now of economic importance. In the present instance, there is the threatened danger that many of our game-birds and mammals will be nearly or quite exterminated through the excessive hunting which free marketing will undoubtedly bring. This impending calamity is worth fighting against."

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the editor, at 53 Arlington Avenue, Providence, R. I.

PROGRAM-MAKING

Not only Audubon Societies, but Bird Clubs and various organizations interested in the study and conservation of birds, are considering the annual problem of what to do next which will best stimulate their members and appeal to the public. The very fact that this problem must be considered from such a point of view is, at once, a confession and a concession; inasmuch as the general average of members, on the one hand, not only need but demand an attractive program mapped out to whet their interest, while, on the other, coöperation with the public is an essential of growth, without which any isolated, individual group of bird-lovers must eventually dwindle and disintegrate.

Schedules of work should be recognized as a vital part of any organization, and the effort put into their making valued at its true worth. Unfortunately, too many people are willing to shift the burden of program-making on to the shoulders of a few efficient, self-sacrificing workers, without taking the trouble to discuss conditions or to make helpful suggestions. An undue amount of responsibility is consequently thrust upon the program-maker.

The measure of success to which any society attains may be readily estimated by the kind of program it carries out. With this fact in mind, a yearly program of work becomes a test of strength and activity on the part of members, as well as an index of growth.

The question each member should ask himself is, Am I *doing my part* of the work?

A program ought not to be a formidable affair, overambitious, complicated, and involving an undue amount of work from those who carry it out. Like a house, or a library, or a museum, it should fit those who are to use it, otherwise it will fall far short of the mark.

For this very reason, it is impossible to offer a set schedule which shall meet the requirements of all Audubon Societies and Bird Clubs. Suggestions may help to some extent, but the wisest course is to investigate thoroughly the needs and possibilities of your own particular community. The difficult part of arranging a program is not in the formulation of a printed schedule, but rather in establishing a direct relation between that schedule and the public for which it was made.

Suppose your Society covers a locality which is becoming overrun with Starlings. It is of great importance for everyone to know about the habits and distribution of this species, in order to gather reliable data upon which to base laws regarding this intruder from the Old World.

Or, suppose you are confronted with the gypsy and browntail moth pest, or the chestnut-disease fungus, your duty is plainly to investigate conditions and to inform people of the community how to control these menaces to vegetation. The adaptability of birds is a matter for careful study with regard to such pests, and in this connection, the feeding-habits of tree-loving species might well be studied with minute care.

Other problems which belong to local societies as well as to state or federal commissions, to solve, are changes in bird-population, decade by decade, or year by year, correlated with changes in habitat and distribution; opportunities and need of bird-protection; propagation of wild birds under domestication; nature-study in the schools and home, and a systematic survey of the arrival and departure of migratory species.

Each of these topics may be subdivided in different ways, and other topics may be added to those given above, but any one of them, if thoroughly taken up, would furnish work for many observers. Perhaps the criticism might be fairly made that the schedules of work undertaken by most Audubon Societies are too fragmentary or, in frequent instances, too desultory. Why not commence this year and take one objective point of attack, a single problem, and devote more time and thought to that?

The following communications from quite different sources show the value of doing one thing well. The first gives the result of observations during mid-summer in a limited area by a class sufficiently large to be compared with the average local Audubon Society, or Bird Club. The second deals with the problem of providing a suitable food-supply for birds which ordinarily migrate farther south.

BIRD-STUDY AT THE UNIVERSITY OF VIRGINIA SUMMER SCHOOL

During the sessions of the University of Virginia Summer School, for several years a group of teachers numbering from fifty to seventy-five has given a good deal of time to careful and accurate bird-study. This work has been entirely voluntary, for the University does not allow credit for bird-study in the nature-study course.

These early morning walks at five or at five-thirty o'clock, while testing the earnestness of the bird-lover, did not interrupt the regular work of the school, beginning at 8:30 A.M., but encouraged the formation of friendships, and the exchange of information regarding birds, between teachers from all sections of the United States.

Real bird-study at the University of Virginia Summer School was started by Dr. K. C. Davis, of the Peabody College for Teachers (Nashville), who conducted it most successfully from 1910 to 1912. Other work kept Doctor Davis in New Jersey for the

session of 1913, and the bird-study class fell to the writer, who had enjoyed many bird-walks with Doctor Davis.

A large class cannot do very close work in identifying shy birds, but our identification was successful, as will be seen from a list of summer residents made between June 25 and August 5. These bird-walks covered territory within two miles of the University, with the exception of two week-end trips to Humpback Mountain in the Blue Ridge, where the additional species noted in the list were found.

Summer Residents Identified near the University of Virginia

A.O.U.

- 190—American Bittern
- 191—Least Bittern
- 200—Little Blue Heron (immature)
- 201—Green Heron
- 263—Spotted Sandpiper
- 273—Killdeer
- 289—Bob-white
- 300—Ruffed Grouse (on Humpback)
- 310a—Wild Turkey (on Humpback)
- 316—Mourning Dove
- 325—Turkey Vulture
- 360—Sparrow Hawk
- 373—Screech Owl
- 387—Yellow-billed Cuckoo
- 388—Black-billed Cuckoo
- 390—Belted Kingfisher
- 393b—Hairy Woodpecker
- 394c—Downy Woodpecker
- 406—Red-headed Woodpecker
- 412a—Flicker
- 417—Whip-poor-will
- 420—Nighthawk
- 423—Chimney Swift
- 428—Ruby-throated Hummingbird
- 444—Kingbird
- 452—Crested Flycatcher
- 456—Phoebe
- 461—Wood Pewee
- 463—Yellow-bellied Flycatcher (on Humpback)
- 465—Acadian Flycatcher
- 467—Least Flycatcher (on Humpback)
- 477—Blue Jay
- 488—Crow
- 495—Cowbird (on Humpback)
- 498—Red-winged Blackbird
- 501—Meadowlark
- 506—Orchard Oriole
- 507—Baltimore Oriole
- 511—Purple Grackle
- House (English) Sparrow

A.O.U.

- 529—Goldfinch
- 540—Vesper Sparrow
- 546—Grasshopper Sparrow
- 547—Henslow's Sparrow
- 560—Chipping Sparrow
- 563—Field Sparrow
- 567e—Carolina Junco (on Humpback)
- 581—Song Sparrow
- 587—Towhee
- 593—Cardinal
- 598—Indigo Bunting
- 608—Scarlet Tanager
- 610—Summer Tanager
- 611—Purple Martin
- 614—Tree Swallow
- 616—Bank Swallow
- 619—Cedar Waxwing
- 622—Loggerhead Shrike
- 624—Red-eyed Vireo
- 627—Warbling Vireo
- 628—Yellow-throated Vireo
- 631—White-eyed Vireo
- 636—Black and White Warbler
- 638—Swainson's Warbler
- 639—Worm-eating Warbler
- 641—Blue-winged Warbler
- 652—Yellow Warbler
- 654—Black-throated Blue Warbler (on Humpback)
- 671—Pine Warbler
- 674—Oven-bird
- 676—Louisiana Water-Thrush
- 677—Kentucky Warbler
- 681—Maryland Yellow-throat
- 683—Yellow-breasted Chat
- 684—Hooded Warbler
- 686—Canadian Warbler (on Humpback)
- 687—Redstart
- 703—Mockingbird
- 704—Catbird
- 705—Brown Thrasher

Summer Residents Identified near the University of Virginia, continued

A.O.U.

- 718—Carolina Wren
- 721—House Wren
- 724—Short-billed Marsh Wren
- 727—White-breasted Nuthatch
- 731—Tufted Titmouse
- 736—Carolina Chickadee

A.O.U.

- 751—Blue-gray Gnatcatcher
- 755—Wood Thrush
- 756—Veery (on Humpback)
- 761—Robin
- 766—Bluebird

—J. BOWIE FERNEYHOUGH, *Richmond, Va.* (P. O. Box 1458).

An Effort to Illustrate the Advantages and Possibilities of Inducing Desirable Birds to Remain within the Boundaries of the State During the Winter Months

There seems no reason to doubt that the fall migration of several species is due primarily to the absence of an adequate food-supply, and that heavy snows and low extremes of temperature, while of some importance, are not vital factors in causing this phenomenon. Proof of this is afforded when we find large flocks of Robins here during some of our severest winters, detained by the various wild fruits, chief of which is the hawthorn or thornapple (*Cratægus*).

This beautiful shrub grows commonly throughout the foothill and adjacent plain region from 5,000 to 8,000 feet, bearing fruit liked by many birds, such as Robins, Jays, and numerous Finches. As it yields readily to cultivation and is in itself a beautiful ornamental shrub, its introduction and propagation in city parks and residence districts is much to be desired.

To illustrate its value to the avian world, a group containing a small clump of the bushes has recently been finished, and is now on exhibition in the Bird Hall, showing Robins, Solitaires, Jays, Juncos, Towhees, Song, Tree, and Gambel's Sparrows, feeding on the seeds and berry pulp.

Near by an insect-killed pine has been placed, with Rocky Mountain and Pygmy Nuthatches, Rocky Mountain Creepers, and Long-tailed Chickadees, searching out each crevice for eggs and larvæ, while a large Rocky Mountain Hairy Woodpecker is sounding for borers.

This group is the first of a series of four, now planned, each exhibiting a season with the characteristic birds at their work as man's most important ally.—T. LINCOLN, Acting Curator of Ornithology, Colorado Museum of Natural History, Denver, Col.

Both of these communications offer practical suggestions, which have been tested in at least one locality with success. By comparing the summer list of birds identified at the University of Virginia by a class of seventy-five with the list of a year obtained by a single boy, with hardly any assistance, in West Virginia (see *BIRD-LORE*, May-June, 1914), some idea may be had of the great value of the "limited area" study as opposed to hit-or-miss observations in various localities.

These lists are in themselves of considerable interest, since they contain the record of Carolinian, Alleghenian, and Canadian faunal differences within specific areas. Compare them with lists which you may make in other places, and note the differences of distribution.

The suggestion of discovering a suitable winter food-supply for desirable species is one that many societies might follow up with good results. Such an investigation would naturally lead to experiments with a variety of trees and shrubs, and, incidentally, add much to a general knowledge of arboriculture.

Other methods of work will be welcomed and discussed in this department.
—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XVI: Correlated Studies, Reading, Observation and Recreation

THE PERIOD OF SONG

Touch your lips with gladness, and go singing on your way,
Smiles will strangely lighten every duty;
Just a little word of cheer may span a sky of gray
With hope's own heaven-tinted bow of beauty.
Wear a pleasant face wherein shall shine a joyful heart,
As shines the sun, the happy fields adorning;
To every care-beclouded life some ray of light impart,
And touch your lips with gladness every morning.—NIXON WATERMAN

Vacation-time has come again, books and lessons are laid aside, examinations and rank forgotten. Why have an exercise for the Junior Audubon members in midsummer, even in the School Department of BIRD-LORE? Why, indeed, except to add to the interest of the long, hot days when body and mind relax and sag, and precious time is wasted for lack of energy to fix upon anything which seems worth while?

The following exercise is correlated with some things which you may never have thought of as studies, namely, observation and recreation. It is rather a curious fact that most people have to be taught to observe and to play, unless they have grown up under very favorable conditions for cultivating these gifts.

It is well to read as much as one can, for the right kind of books and papers and magazines contain a vast amount of observation presented in attractive form. It is better, however, to be able to observe for one's self, to cultivate the habit of observing, and of mentally crystallizing into memory what has been observed.

Add to the habit of reading and observation the gift of knowing how to play, and the combination is still better. One philosopher—and, by the way, a philosopher who practises what he teaches—has called attention to the advantage of learning to play as one works. The reason that work of any kind is likely to become first a tiresome task and then dull drudgery is because no element of recreation enters into it. The spirit which makes one feel like playing also makes one contented and cheerful. The haymaker who starts to his

work singing "Happy as the day is long," is a man who finds something in that work besides a hard task, and who gets something out of it besides fatigue and discouragement. He works and plays at the same time.

This same beautiful lesson is taught us by the birds. With them, song is an expression of health and energy, and of a natural instinct linked with the great law of life which we touched upon in the last exercise. The period of song is at its best when mates are chosen and nesting is begun, but song is also an accompaniment to food-getting, with many species. Watch the Vireos feeding and singing, throughout the long, sultry summer, or listen for the Nighthawk sweeping the twilight-gloom, calling its strange, rasping note.

Hear the frequent repetitions of the Maryland Yellowthroat's song, as the busy singer slips about shrubbery by roadside or brook; the bubbling phrases of the Bobolink, as it rises for a moment from the grassy meadows, or the faint *tzee* of the secretive Savannah Sparrow from the mow-fields. If you are so fortunate as to be in the North at this season, you cannot fail to hear the silvery pipe of the White-throated Sparrow, now here, now there, all the day, or a strain from the harp of the Hermit Thrush in the evergreen woodland; although these occasional snatches are but a suggestion of the wonderful matin and vesper choruses of these famous singers.

The 'flycatcher clan' sing often as they feed, some more than others, and notably the indefatigable Chebec, while the dancing, flashing Goldfinch wings its way on a path of song. From every side comes some sound of cheer, some reminder of the jubilation of life. Train not only your eyes but your ears to observe, for strange to say, we hear ordinarily only a fraction of the songs of birds, insects, frogs, leaves, winds, and ocean, while we see oh! so little of the shifting symphonies of color and form on Nature's canvas. We live in a world of sound, of vibrant life, and we should be attuned to it.

The period of song with birds is different with different species, but we may distinguish some points of resemblance which hold good for all with regard to the exercise of the gift of song. But, first, we should notice that all birds cannot sing equally well. The song-mechanism of a bird is in the lower part of the throat or larynx and is called the *syrinx*. This mechanism is complicated and difficult to explain, but it consists in part of a membrane held tautly in place and delicately adjusted by various sets of muscles.

In certain birds the song-mechanism is very simple, almost rudimentary, and such an instrument can produce only hoarse or raucous call-notes, capable of hardly, if any, modulation. The Ostrich, Emu and Cassowary are examples of species that lack much of the mechanism of song. All water and shore-birds, gallinaceous birds, Doves and Pigeons, birds of prey, the Woodpeckers, Cuckoos, Kingfishers and Whip-poor-wills, Swifts, and Hummingbirds have poorly developed singing instruments, and so we find that of our birds, true song belongs only to the perching species, and even among these there is a great diversity in the development of the *syrinx*.

All birds have call-notes, which are varied more or less to express sociability, fear, the mating instinct, solicitude for offspring and natural exuberance. Usually both male and female birds possess call-notes in equal variety and intensity, but this is not true of song. In a few species the female sings some, for example the Purple Finch, but in the majority of perchers, the males alone possess the full power of song. The reason for this is not hard to discover, when we study the part which song plays in the daily life of birds. The female birds, as mothers, must stay quietly hidden on the nest, to incubate their eggs and shelter their nestlings, while the males are much freer to leave the nesting-site and keep watch for dangers and enemies; so to them is given the joyful task of singing. Just how much the beautiful songs which they sing mean to their mates, we do not know, but we may be sure that song is a wise provision of Nature, and that it is an indispensable part of the bird's life.

It is a delightful accomplishment to be familiar with bird-songs, and a difficult one, too. It is perhaps quite as delightful, but far more difficult, to acquire familiarity with the call-notes of even the most common species, so great is their variety and similarity.

No part of bird-study can give you more pleasure at this season than the study of song. Those who have 'an ear for music' will gain a hold on bird-music much more readily than those who are duller of hearing, but no one need despair who has patience and enthusiasm. You can hear birds far oftener than you can see them at this time of the year.

And as you awaken to the strains of the morning-chorus of the feathered choirs about you, remember this little midsummer sermonette on song, and

"Touch your lips with gladness, and go singing on your way."

SUGGESTIONS

1. How many phrases do the different species of Vireos sing per minute? Time the Red-eyed, Yellow-throated, and White-eyed Vireos.
2. What kind of call-note does the Robin give in times of excessive heat?
3. What birds have been named from their call-notes and songs?
4. What are the best singers among birds that you know?
5. Can you tell the call-notes of nestling birds from those of their parents?
6. What birds sing at night? How late have you heard birds sing?
7. Are the evening and morning songs of birds different.
8. Study one common species and see how many different kinds of songs and call-notes it gives. Take the Robin, for example.
9. Do individuals of the same species of birds sing differently? Study the Song Sparrow, for example.
10. Do individuals of the same species sing in different keys in different localities? Study the Baltimore Oriole, for example.
11. Can you recognize any single bird by some peculiarity in its song?
12. What birds are mimics in song? What birds lure their prey by means of mimicry?
13. What other creatures besides birds have the gift of song?—A. H. W.

FROM ADULT AND YOUNG OBSERVERS

A STUDY OF A WHIP-POOR-WILL FAMILY

This Whip-poor-will was discovered May 25 by my father and mother. They were walking in the woods on a side hill, and went to the crest to obtain the view. It was a bare granite ledge, that at one time had been worked, and large blocks of stone lay strewn about. As they stepped back into the woods, which at that place consisted of a young growth of walnut and chestnut, with more or less underbrush and huckleberry bushes, a large brown bird flew from the ground at their feet and alighted on a fallen tree close by. Instead of resting crosswise on the limb, [the bird] sat lengthwise, so father thought it must be a Whip-poor-will, as they are quite numerous in this locality



WHIP-POOR-WILL ON NEST

"Her brown, blotched plumage so closely matched the leaves that I did not see her"

after sundown. On looking for the spot from which it flew, they saw two conspicuous eggs, pale blue mottled with small dark brown spots. There was no visible nest, the eggs resting on the dead leaves, which were pressed down smoothly by the bird's body.

The next morning I went with father and set up my camera about four feet from the nest. My kodak has a plate attachment, and with the help of the ground glass I carefully focused on the eggs. After taking a time exposure, for they were in the shade, I attached a long rubber tube, with a bulb, to the camera, and dropped the end over a stone wall about thirty feet away. Covering the camera with a black cloth and partly hiding it with leafy twigs, I sat down behind the wall to wait for the old bird to come back to her nest. I had taken a book with me, thinking the bird would be afraid of the camera and might not return very soon. In about half an hour I looked through the chinks of the wall, but could not see anything of the bird. After waiting another hour, I started for home to get some lunch. Passing by the camera, I saw that the eggs had disappeared. Going closer, to look more carefully, I was startled by the bird suddenly flying up from the ground at my feet. She had been sitting over the eggs, and her brown, blotched plumage so closely matched the leaves that I did not see her. Then I thought

to myself that, if she would keep as quiet as that again, I could take a time exposure, because a snap-shot would not be very good in so shady a place. Setting the camera for a time picture, I went home for lunch.

When I returned, I approached the nest very cautiously and came within fifteen feet of the exact spot where I knew she would be crouched on the leaves, before I could make out whether she was there or not. When the camera snapped, she did not move, but remained quiet, with her eyes half closed. I had a field-glass and examined her through it. The glass made her stand out more distinctly from the leaves, but even then, if it had not been for her bright black eyes, I could scarcely have known that I was looking at a live bird, so closely did her dark brown feathers, mottled with gray and black, resemble patches of lichens, moss, and dead leaves. Even her short curved bill



WHIP-POOR-WILL'S NEST AND EGGS

was half hidden by a thin tuft of feathers. She squatted low on the ground, with her large head drawn close to the body, looking like a half-decayed stump. It seemed a pity to disturb her, but I wanted more pictures, so it had to be done. When she flew as I approached, she seemed merely to spread her broad wings and rise without an effort. With a few slow, silent wing-strokes she sailed off from twenty to thirty feet and dropped to the leaves, instantly becoming invisible although in plain sight. As long as she remained quiet I could not pick her out except with the aid of the glass, but every few minutes she would give a low, hollow, subdued, cluck, and move one step nearer. Fitting a fresh plate in the camera, I retired behind one of the rocks on the ledge not more than twenty feet away, holding the bulb in my hand. In less than ten minutes I saw her silently drop out of the air on to the eggs. Letting her remain quiet for half an hour I secured another picture. After taking three views of the old bird in this way, I went home and left her in peace.

A week later I visited her again, but the eggs had not hatched. On the following weekly visit, when she flew, there was nothing in sight but a few broken bits of egg-

shells. Very carefully I made my way to the spot which the old bird had just left, and minutely examined the leaves for the young, but without success. The mother was a short distance away with half-spread wings. She slowly moved about, uttering soft 'chucks' and taking a single step at each sound. As she seemed so worried, I thought her babies must be in the neighborhood, so I went to the ledge and sat down behind a



YOUNG WHIP-POOR-WILLS

stone, to see if she would call them. In a few minutes she alighted on the former nesting-place and uttered a few gentle, almost inaudible 'coos,' like a Dove, only very much softer. Then, only two feet away from the old bird, I saw two fluffy yellow-gray chicks come hopping and running over the leaves to their mother. They nestled down out of sight under their mother's breast, and the old bird closed her eyes in contented sleep. Some time later I stood up, and at the first movement the mother slightly opened her eyes. As I approached, she did not move until I could almost touch her, and when she did fly she gave a warning 'chuck,' and both birdlets ran a few steps and squatted on the leaves. If I had not seen them as they ran and stopped, I should never have been able to find them, for they looked exactly like the dried leaves on which they sat. Both were covered with yellow down, tipped with gray or white, and their immense mouths were hidden in downy feathers, only the tips of their bills protruding from the soft sheath. One of them kept his eyes fast closed, while the other watched me between his half-opened lids. Moving one nearer the other, I placed it so as to get a side view (the other had its back to the camera) and took their pictures.

The next week, as it was dark and threatening rain, I did not take my camera with me when I visited the Whip-poor-wills. The mother bird was not in her old place, so I walked around in the neighborhood and soon started her up, but again I could not find the young birds. Going back among the rocks, I waited until she had called them together. When I came near, the mother flew and her babies squatted on the leaves. They had grown to twice their former size and were well feathered, being almost ready to fly away. The plumage was light gray, with dark brown spots on the back and along each wing, giving them the appearance of moss-covered stones. While admiring the delicate blending of their somber colors, it seemed to me that I could just see traces of

the beginnings of fear in their sparkling black eyes. This I knew was a sign of approaching maturity and I left them with but a faint hope of ever seeing them again. On the next visit they were nowhere to be found, and I knew that they no longer belonged to me, but to the wide, wide world.

I forgot to say that I saw the Whip-poor-will's mate only once. It flew from a tree where it was roosting, as soon as I came in sight, and disappeared over the crest of the hill.—JOSEPH B. BOWEN, *Grants Mills, R. I.*

[Aside from the general interest of this description, the writer's *method of observation* is worthy of notice. Those who care to look up the topics of protective coloration and the development of fear in birds and other animals will be repaid for the time spent in such study.—A. W. H.]

COÖPERATIVE OBSERVATIONS

In the March-April number of BIRD-LORE there is a communication from C. C. Custer, Piqua, Ohio, in which he tells of observing "some grayish-looking Swallows entering a small opening in the side of a limestone cliff." The hole proved too small and dark to be explored. Mr. Custer asks: "What kind of Swallows were they?"

Undoubtedly these were Rough-winged Swallows. The writer lived in the Middle West four years and had frequent opportunities to observe this species at close range, in Iowa, South Dakota, and Minnesota. Mr. Custer well describes it as a "grayish-looking" bird. It is almost the counterpart of the common Bank Swallow, except that, instead of the white underparts, with a dark band across the breast, the throat and breast are a uniform soft gray, shading into white on the belly. The Bank Swallows nest in tunnels in banks, while the Rough-winged Swallows nest more commonly in crevices of masonry or holes in ledges, though often in banks, in company with the Bank Swallows. Moreover, the latter nest in colonies, while the former prefer a more solitary life, seldom more than one pair nesting together. If one sees what looks like a Bank Swallow entering a crevice in a ledge or masonry, he may be reasonably sure he has seen a Rough-winged Swallow.

The writer once watched, for some fifteen minutes, one of these birds in Cherokee, Iowa, as it perched on a dry twig close at hand, and had a splendid opportunity to observe the roughness on the wings caused by the fluting of the ends of the outer primary feathers. Hence the name, 'Rough-winged' Swallow. One must be very close to the bird to note this, however.

I have never seen the Rough-winged Swallow in New England, though it is said to be found in southwestern Connecticut, and a pair has been reported as breeding for many years in a limestone quarry at North Adams, Mass.—MANLEY B. TOWNSEND, *Nashua, N. H.*

[For the occurrence of the Rough-winged Swallow in Connecticut, consult Sage and Bishop's 'Birds of Connecticut'.—A. H. W.]

THE KILLDEER

One year a Killdeer lived in our pasture. When we were driving our cows down to get a drink one day, we were walking along and all at once a bird flew up and my brother started to chase it, because it went fluttering along as if it was hurt. I said: "Go and look for the nest. It isn't hurt." Then he went back to look for it and found four eggs lying in a little cow track, with their pointed ends pointing down. Their color is a delicate creamy white tint and they are thickly spotted or lined with chocolate-brown. Like the eggs of all Plovers, their size is out of all proportion to the size of the bird. As soon as the little ones are hatched, they leave the nest. When you go to look for them, the old one will start up and act as if it cannot fly, and the young will run and hide. The young are brown on the back, and have a white breast with a black streak under the neck. They have long legs something like an Ostrich's legs. The Killdeer builds in the swamps the most. Its call is *kildee, kildee, dee, dee, dee*.—CHARLEY B. PRUDDEN (age 14, seventh grade), *Bashing Ridge, Indiana*.

[The Killdeer, like the Whip-poor-will, builds little or no nest, and yet it succeeds in making itself quite inconspicuous while incubating its eggs and brooding its young. With the Bartramian Sandpiper ('Upland Plover') and certain others of its kind, this beautiful species has become scarce in sections of its range, by reason of changing conditions and inadequate protection. Let us study the habits of ground-nesting species more closely, in order to better conserve them.—A. H. W.]

THE KING BIRD

Knight defender of every nest,
 Foe of every shade-tree killer;
 Hunter of many a common pest,
 Gad-fly, moth, and caterpillar.

Policeman over the fields of green,
 Chasing every crow from the farm;
 Watchman keen when a hawk is seen,
 Giving the poultry wild alarm.

Beautiful bird is he in flight,
 Sporting a fan of brilliant feather;
 Black with a border of perfect white,
 Useful in every kind of weather.

Bird King indeed of the catcher clan.
 And Queen of the clan his mate,
 Proud as a prince of Hindostan,
 Or Alexander the Great.

—By permission of DR. GARRETT NEWKIRK.

NOTES FROM THE SOUTH

On Sunday, July 13, 1913, I was fishing in Lake Centennial, part of the Mississippi River. When the fish stopped biting, I persuaded my uncle to row me over to De Soto island, which extends along the whole water front of Vicksburg.

This island is a bird paradise. We got off on a large raft, and back in the Willows we could see Purple Grackles, Red-winged Blackbirds, Swainson's Warblers, and could hear Prothonotary and Parula Warblers. On the mud-flats and in shallow ponds, White Ibises, Reddish Egrets, Green Herons, and Little Blue Herons without number were walking about in search of frogs and fishes.

I would have walked inland, but as the high water had just gone down, the ground was too soft. I also saw a few Black-necked Stilts, Willets and Killdeer. Over the water, at least fifty pairs of Least Terns were seen flying about.

Going back, I had my back to the island, but my uncle, who was rowing, was facing it. Suddenly, he told me to look around, and there was a Least Tern, flying straight after the boat. When about six feet away, it turned, flying so close by the boat that I could see that a fish it carried was a roach minnow.—MAURICE B. EMMICH (aged 12), *Vicksburg, Miss.*

[Another example of the treasures in store for the bird-lover in a 'limited area' excursion. It may be possible that the Grackles seen were Boat-tailed rather than Purple Grackles, and the Willets some other species of the large family of shore-birds, but this does not make the observations of less value or interest. It takes sharp eyes and long field-experience to know birds, and this boy's enthusiasm promises well for an intimate acquaintance with nature.—A. H. W.]

The Robin's Nest

About two weeks ago, I saw a Robin building a nest made of mud and dead grasses. It made its nest near my house in a sugar maple tree. It sat there for two or three weeks on the bluish green eggs, until the baby Robins came out of the little eggs. They looked like the mother and father birds, with brown spots on their breasts. When they are learning to fly, the father bird flies under them; so, when they fall, they fall, not on the ground, but on the father's back.—MARGARET MOORE (aged 8, Third grade), *St. Clair, Mich.*

[This brief letter contains personal observations in every sentence and is especially commendable for the variety of these observations. The material from which the nest was made, the location, approximate time of incubation, plumage of the nestling young, and initial flight of the nestlings are mentioned. What near relatives of the Robin always have spotted breasts? How does a nestling Bluebird look? Is the statement about the flight of the young strictly correct?—A. H. W.]

A CHIPPING SPARROW

Last summer in New Hampshire, while I was playing, I climbed a tree and heard a noise. I had often climbed the tree before and knew that there was a Chipping Sparrow's nest, but never heard so queer a noise before. When I got up a little higher and got a good view of the nest, I saw a young Chipping Sparrow hanging by one leg. He had evidently fallen out of the nest and got his leg caught in one of the pieces of string the nest was made out of. Another boy and I got a long stick. Some people under the tree held a rug, and we got the young bird safely on the ground. All this time the mother and father were wild. I do not know if the young bird lived or not, but I hope so.—PENDLETON MARSHALL (aged 11), *New York City*.

[It might interest this correspondent and other readers to make a catalogue of accidents with which birds have been known to meet. The writer saw a nestling Phœbe, a few summers ago, that had been strangled by swallowing one end of a hair, which had evidently been wound around the food given it. The hair was so long that the free end may have caught on some object outside the nest, thus resisting every effort of the young bird to swallow the food attached in this accidental way.—A. H. W.]

CORRECTION

In the preceding issue, page 213, read clan for class.





SORA

ORDER—Paludicolæ
GENUS—Porzana

FAMILY—Rallidæ
SPECIES—Carolina

THE SORA RAIL

By EDWARD HOWE FORBUSH

The National Association of Audubon Societies

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In the marsh the wilderness makes its last stand. Civilization sweeps away the forest, dams and diverts the streams, cultivates prairie, hill, and meadow, traverses the pond in boats, and destroys the native birds and mammals, but the marsh remains unconquered to the last. Along the Atlantic seaboard, where agriculture and civilization have held sway for hundreds of years, stretches of marshland yet extend even within the corporate limits of large cities; and many of the shy creatures that inhabited them when Columbus discovered America still maintain their homes among the reeds. Here the great snapping-turtle drags its slow length along, here the Bittern may be heard "driving its stake," and here the Rail peers from its age-old fastness—the cover of reeds, flags, and sedges. Man dislikes the quaking bog and the miry ooze, and so it remains a refuge for the light-footed and defenseless ones that can run over its shuddering expanse or crawl in its mud and water.

Rushes, sedges, and waving cat-tails, and lush water-plants in wild profusion, form a curtain screening the private life of the Rails from human view.

**A Bird of
the Marsh** We hear sounds from behind this screen, and now and then a "Mud-hen" peeps out; and so we have come to associate them with the steaming summer morass, the pond-weeds, pickerel-weed, and the lily-pads over which, light of weight and splay-footed, they can run at will. Some of their notes are such as might be expected to come from a frog-breeding morass; others are as sweet and wild as those of the Whip-poor-will or the Solitary Vireo. Rails have some notes that resemble and

Its Notes harmonize with the frog-chorus, such as *kek, kek, kuk, kuk, kuk*, and others more subdued and varied. I may venture to assert that no man yet has fully identified all the notes of all the species of American Rails, and probably no one man ever will. I have heard many notes in the marshes that I could not identify. In 1889, William Brewster devoted most of his time for two weeks to an attempt to see a supposed Rail that was heard calling in the Cambridge marshes. He never saw it, and the voice is still a mystery, although it has been heard many times since and in other places. This bird may have been a Yellow Rail, but I have twice heard a wonderful solo from the marshes, partly original, and partly in seeming imitation of other birds, which, from its quality, I

**Sings like a
Frog** can attribute only to the Sora. This "song" was kept up intermittently for several hours, and showed great versatility; some of the notes were frog-like, but most of them were like those of a bird.

A common call, or song, has been rendered *ker wee*; and the Sora has a high 'whinny;' also notes like peeping chickens.

The Rail is a bird of mystery. I always feel like putting an interrogation point after the name. About the habits of no other common birds do we know so little. The Sora Rail is one of the most abundant and widely spread birds of North America. It has been slaughtered and sold in the markets by the hundreds of thousands for more than a century. It breeds commonly, even abundantly, over a great part of the United States and Canada; yet most of its habits, and perhaps many of its notes, are still largely its own secret. While floating in a light canoe down the sluggish current of some marsh-bordered river in September, you may watch the Sora silently stealing along the muddy margin, poking things with its short yellow bill, and gently jettling its tail; or, in tramping along the edge of the marsh, you may see one flutter up, just above the grass and reeds, and fly awkwardly with dangling legs across some slimy pool, to drop clumsily out of sight again, as in the accompanying picture. This is about all the observant traveler ever sees of the

**Secretive
Habits**

bird. Rails are timid, skulking fowls, and pass the greater part of their lives wading under cover of water-plants or squeezing between the grass-stems. They have done this so much that their little bodies have become compressed from side to side, and they can voluntarily shrink in width so as to push their way between stems apparently only half an inch apart. Hence the phrase 'thin as a rail.' Rails make for themselves dark and winding passages among the reeds, grasses, and rushes, along which they may run swiftly to escape four-footed enemies, and at the same time remain concealed from winged foes. They come out into the open when they believe that the coast is clear, with no enemy in sight, or at night, when Hawks are absent. The Black Rail has kept its secrets so well that, although a century has elapsed since Americans began to study ornithology, Arthur T. Wayne, in 1904, was the first person to see the mother-bird on her nest; this was in South Carolina. Perhaps some investigator of the future may build a watch-tower in a marsh and study the habits of the marsh-folk with spy-glasses; but, until something of this sort is undertaken, we are likely to know little of Rails' habits. The curiosity of these birds, however, may become of advantage to the observer, as they have been known to approach a hunter lying in wait for ducks, and peck his clothing, boots, or gun-barrel. A quiet man is to them a wonder, for they are accustomed to associate much noise and movement with all humankind.

The Sora nests about the borders of prairie sloughs, in the soft dense grasses, or sometimes on a tussock. In the marshes of the East, the nest is

**An Ark in the
Bulrushes**

often placed in a bunch of coarse grass, or among the cattail-flats or other rushes. It is sometimes a bulky, arched structure, made of weeds, grasses, rushes, etc., sometimes a slight platform or a mere shallow basket. It is often set in tall cattails several inches

clear of the water, with a pathway of trampled blades leading to it, while nest and all are screened by the overarching flags; and occasionally one is found in a tussock on the bank of a brook. The eggs vary from six to fifteen in number, are buffy white, but deeper in shade than those of the Virginia Rail, and are heavily spotted with brown and purple.

Nelson says that the parents desert their nests and break their eggs when floods submerge their homes. The young Rails just from the egg are fascinating and supremely comical mites. Little balls of down, black as jet, each has a bright red protuberance at the base of the bill, and an air of pert defiance—is a very clown! So says Dawson who came upon a brood just hatching. All took to their heels except two luckless wights not yet out of the egg. At his approach, one more egg flew open, and a little black rascal rolled out, shook its natal coat, tumbled off the nest, and started to swim off to safety.

The young of this bird have often been mistaken for those of the little Black Rail. They are certainly both small and sable. When they once leave the nest, they are constantly in danger. Most of the larger animals and birds of the marshes, from the Sandhill Crane down to the mink, devour the eggs and young of Rails wherever they find them. In the water, snakes, frogs, fish, and turtles lie constantly in wait to swallow them. They soon become experts in climbing and hiding. They can clamber up and down the water-plants, or run through them over the water by clinging to the upright stems. They swim more like a chicken than like a duck, nodding their little heads comically as they advance. Necessity soon teaches them to drop into the water and dive like a stone to safety.

As the autumn nights grow cooler, migration begins. The ancients believed that the Rails passed the winter in the mud at the bottom of ponds, changing into frogs. Their frog-like notes and the *chug* with which they sometimes dive favored this delusion; also the sudden disappearance of all the Soras on a frosty night seemed suspicious. Some still moonlit night, after a north wind, the Rails disappeared; on the next morning, ice covered the marshes; so the explanation that they had dived to escape the ice gained credence. Now we know that they fly southward after dark. They often dash themselves against lighthouses, poles, wires, and buildings, and one has even been known to impale itself on a barbed-wire fence. The little wings which erstwhile would hardly raise the birds above the grass-tops now carry them high and far. Some cross the seas to distant Bermuda, and they occasionally alight on vessels hundreds of miles at sea. They have been taken on the western mountains even as high as 12,500 feet, in the sage-brush of the desert, and on the cliffs of Panama.

Its Food The food of Rails never has been carefully studied. We know that they are fond of many kinds of insects and worms, and that they eat snails and other kinds of aquatic life; also the seeds

and other parts of water-plants. The Sora, like many other swamp-birds and water-fowls, feeds largely in autumn on the seeds of wild rice. This makes them so fat that they become a dainty morsel for the epicure, and are pursued without mercy by market-hunters and "sportsmen" of all colors, ages, and classes. In the fresh-water meadows, they are sometimes driven from cover by dogs, and many are shot in this manner.

Shooting them in their slow fluttering flight in the daytime is about as difficult as hitting a tin can floating down a brook, and a good marksman rarely misses one. The greatest slaughter is perpetrated on the tide-water marshes of the Middle Atlantic States, where gunners shoot almost anything that flies, from Eagles to Blackbirds, Bobolinks, and Swallows. There, when the tide rises high enough to allow small boats to float over the marshes, boats are poled into every refuge of the poor birds, and as they seek safety in flight they are shot down without mercy. Hundreds of thousands are thus killed by daylight when the tide is high. The negroes of the South pursue a similar sport at night, blinding the birds with torches, and striking them down with sticks. This wholesale killing has greatly decreased the Sora Rail in New England, but the species is very prolific, and is still numerous in many marshes in the West and Northwest.

The draining of lakes and marshes for farming purposes, which breaks up their breeding-grounds, will inevitably reduce their numbers still more, year by year, so that stringent protection will be necessary to maintain the species.

Classification and Distribution

The Sora belongs to the Order *Paludicola*, or marsh birds, Suborder *Raili*, Family *Rallidæ*, and Subfamily *Rallinæ*, which includes the Rails and Crakes. It ranges over most of North America, breeds from central British Columbia, and the valleys of the North Saskatchewan and St. Lawrence rivers, south to southern California, Utah, Colorado, Kansas, Illinois, and New Jersey; and it winters from northern California, Illinois, and South Carolina, to Venezuela and Peru.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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FREDERIC A. LUCAS, *Acting President* T. GILBERT PEARSON, *Secretary*
THEODORE S. PALMER, *First Vice-President* JONATHAN DWIGHT, JR., *Treasurer*
SAMUEL T. CARTER, JR., *Attorney*

Any person, club, school or company in sympathy with the objects of this Association may become a member, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5.00 annually pays for a Sustaining Membership
\$100.00 paid at one time constitutes a Life Membership
\$1,000.00 constitutes a person a Patron
\$5,000.00 constitutes a person a Founder
\$25,000.00 constitutes a person a Benefactor

\$20,000 FOR BIRD-STUDY

The growth of the Junior Audubon Class movement in the schools throughout the northern states and Canada has encouraged the patron of this work to increase still further the extent of his support. Note how this phase of the Audubon movement has developed, as the result of the growing support this great friend of the birds and the children has provided in the northern and western states and Canada! During the school-year ending June 15, 1912, 19,365 children joined the classes. In 1913 the number was 40,342; while the year which closed on June 10, 1914, saw 95,918 pupils in this territory wearing Audubon buttons and obtaining instruction in bird-study and bird-protection.

As every member receives in return for a ten-cent fee ten expensive colored bird-pictures, each with its accompanying leaflet, an outline drawing, and an Audubon button, and as the teacher forming the group receives much valuable printed information and instruction, it will readily be seen that the ten-cent fees by no means cover the cost of the material; not to mention the clerical work, office-rent, postage and expressage bills, which must be paid. To meet the deficit, therefore, our good patron, who still insists on withholding his name from public men-

tion, contributed in 1912, \$5,000; in 1913, \$7,000; for the school-year just past, the magnificent sum of \$14,000; and now, for 1915, he has subscribed \$20,000!

Final Reports

The Junior Class enrollment in the southern states has also been larger during the past year than ever before. This is a splendid indication of increasing appreciation of this work, which Mrs. Russell Sage enabled us to establish and continue up to the present time.

Although Junior clubs are formed in small numbers during all the summer months, the greater amount of the activity comes to an end with the conclusion of the school year. This naturally follows from the fact that the greater number of clubs consist of pupils in schools, who are naturally grouped in their work, and are easily organized. Yet many classes exist outside of schools, and are likely to continue active throughout the summer.

On the next following page is given a full report by states of the number of Junior Classes formed, and number of Junior members enrolled, in the various states of the Union. For the South, the accounts closed on June 1; and for the northern states and Canada, on June 10.

SOUTHERN STATES

States	Classes	Members
Alabama.....	30	471
Arkansas.....	9	123
District of Columbia.....	6	129
Florida.....	177	3,701
Georgia.....	69	1,222
Kentucky.....	89	1,465
Louisiana.....	30	503
Maryland.....	119	2,401
Mississippi.....	38	660
North Carolina.....	57	962
Panama (Canal Zone).....	1	31
South Carolina.....	37	500
Tennessee.....	91	1,716
Texas.....	47	910
Virginia.....	160	2,336
West Virginia.....	97	1,991
Totals.....	1,057	19,121

NORTHERN STATES

States	Classes	Members
Arizona.....	1	16
California.....	55	1,119
Canada.....	221	3,655
Colorado.....	26	447
Connecticut.....	137	2,451
Delaware.....	6	64
Idaho.....	10	180
Illinois.....	439	8,065

NORTHERN STATES, continued

States	Classes	Members
Indiana.....	128	2,200
Iowa.....	169	3,220
Kansas.....	31	498
Maine.....	58	947
Massachusetts.....	359	8,463
Michigan.....	576	10,414
Minnesota.....	243	4,509
Missouri.....	80	1,427
Montana.....	50	770
Nebraska.....	34	422
Nevada.....	28	471
New Hampshire.....	34	597
New Jersey.....	436	9,273
New Mexico.....	22	376
New York.....	779	14,174
North Dakota.....	28	604
Ohio.....	386	7,934
Oklahoma.....	41	608
Oregon.....	42	780
Pennsylvania.....	354	6,790
Rhode Island.....	63	1,096
South Dakota.....	65	901
Utah.....	7	142
Vermont.....	35	674
Washington.....	67	982
Wisconsin.....	115	1,253
Wyoming.....	20	396
Totals.....	5,145	95,918

COÖPERATIVE WORK IN OREGON

The Oregon Fish and Game Commission has been carrying on an active educational campaign during the past few months under the direction of our Western Field Agent, William L. Finley. Prof. Charles F. Hodge, formerly of Worcester, Mass., has been employed jointly by the University of Oregon and the Commission to devote his entire time to lecturing among the schools of the state. Professor Hodge has not only been giving stereopticon lectures upon the economic value of song-birds and insect-eating birds, but also has been lecturing in the schools upon the protection and propagation of game. The idea has been to encourage children in the country toward rearing quail, grouse, and other game-birds, to stock the fields and supply the demand for propagating purposes.

In order to create greater interest from an educational point of view, moving-picture films have been exhibited, illus-

trating the State Game Farm, fish-hatcheries, angling, and other features of outdoor life. An excellent educational film has been secured of school-children making and putting up bird-houses. Others will be taken illustrating wild birds and other animals in various parts of the state, especially on some of the larger wild-bird refuges.

As a result of educational work in the schools, boys in some of the country school districts, who were formerly accustomed to kill birds at every opportunity, have now become their greatest protectors, by supplying food in the winter when the snow is on the ground, and by furnishing bird-homes in the spring.

From the office of the National Audubon Association in New York, 780 Oregon school-children have also been enrolled in Junior Audubon classes, and by this means provided with careful instruction in study and bird-protection.



SOME MEMBERS OF THE COUCH SCHOOL JUNIOR CLASS IN PORTLAND, OREGON
The right kind of bird-boxes

Plans are now being carried out to make a thorough biological survey of the state in conjunction with the United States Department of Agriculture, the University of Oregon, and other state institutions. One of the objects of this work is to collect and publish educational leaflets and other material on the natural history of the state. Mr. Bruce Horsfall, of Princeton, New Jersey, who is well known for his drawings of birds, has been employed to make sketches and illustrations for this work in addition to photographic reproductions, and has taken up his residence in Oregon.

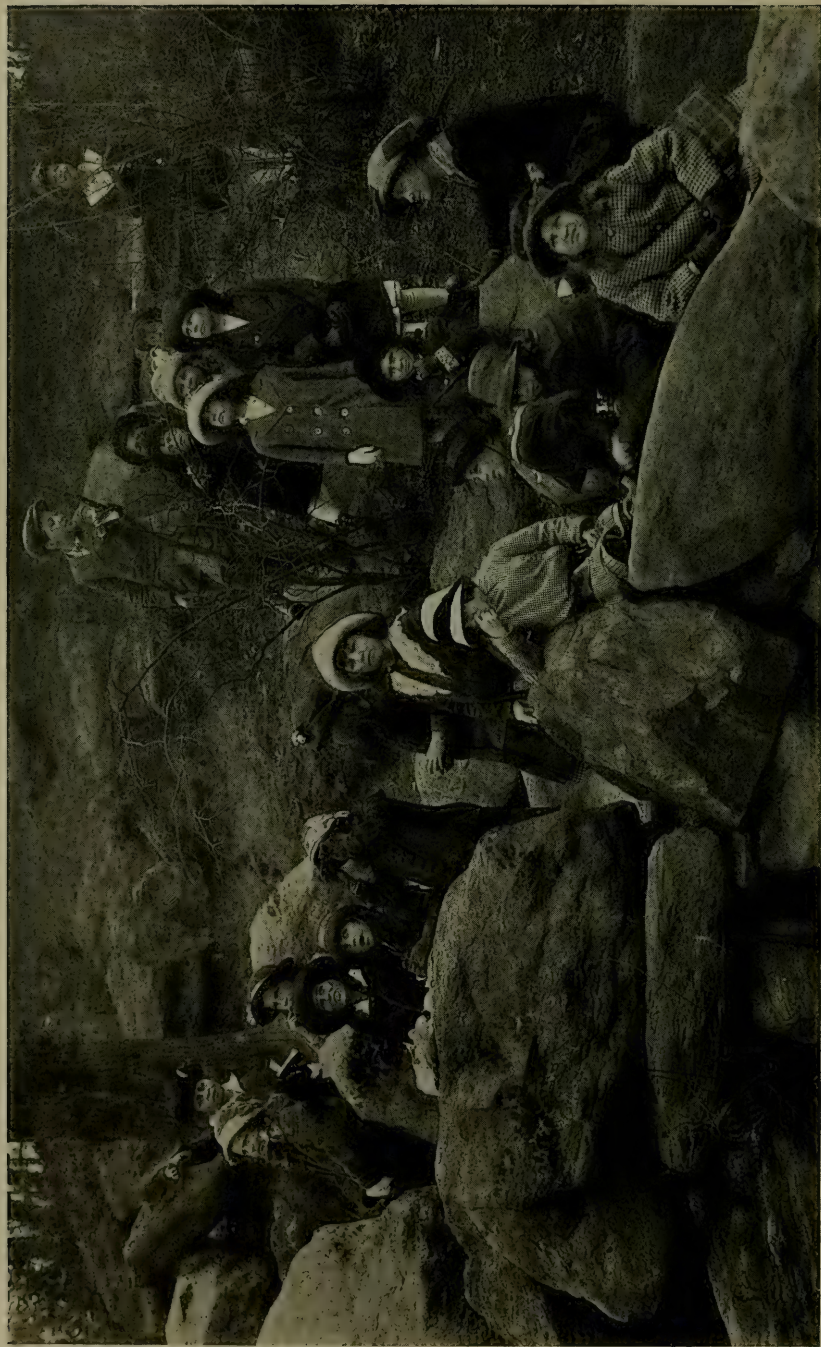
Enthusiasm on Long Island

An Audubon Society has been organized at Forest Hills Gardens, a suburb of New York City, on Long Island, with a large and enthusiastic membership. The president is E. A. Quarles, and the secretary is Miss Mary E. Knevels; and the Junior work, to which particular attention is to be given, is in charge of Mrs. Patience B. Cole and a committee. The society

immediately affiliated itself with the National Association, and further showed its wisdom by seeking the guidance of competent ornithologists and field-agents in planning its local work. President Quarles has sketched for us progress made thus far:

Our first activity was to place fifty Berlepsch nest-boxes about the place. This was done under the direction of Mrs. I. A. Washburne. We then planted Russian sunflower and other seeds that furnish good bird-food, on vacant plots here and there. Special committees on the European Sparrow, and on cats, are hard at work in an endeavor to diminish the menace that comes from these enemies of bird-life. Two lectures have been given, one in the afternoon for the children, and one in the evening for adults. They were enthusiastically received by all present.

We expect to place the Audubon course in our public school when it is opened next fall, and we are much indebted to Mr. Pearson and the National Association for their help in getting organized. It is hoped that this is only a beginning of bird-organization on Long Island, and that not many years may pass before we have a Long Island league of Audubon Societies.



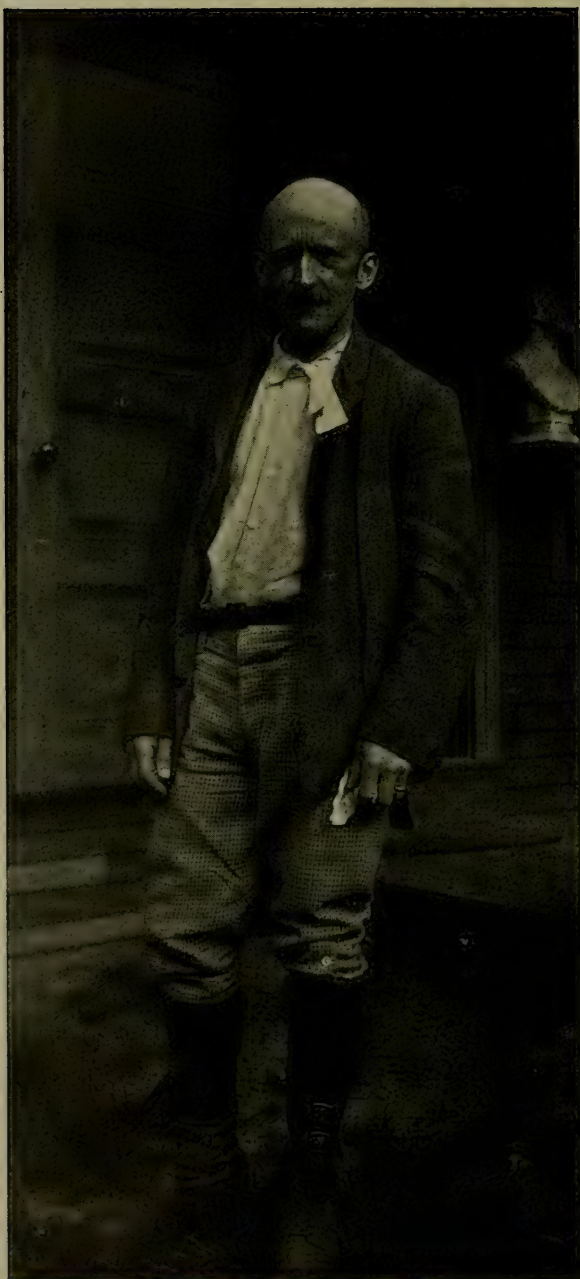
THIRD PRIZE.—STUDYING THE BIRDS IN CENTRAL PARK, NEW YORK CITY
Miss Ida Ulrich afield with Junior Audubon Class No. 1443



LAUREL JUNIOR AUDUBON CLASS, WALLSBURG, WEST VIRGINIA,
MISS S. ELMA SCOTT, TEACHER



SECOND-GRADE JUNIOR AUDUBON CLASS, FORSYTH, GEORGIA,
MRS. T. C. PORCH, TEACHER



ABBOTT HANDERSON THAYER

HONOR TO ABBOTT H. THAYER

It is not generally known that the system of protecting by wardens such of our birds as breed in colonies was originated by the artist, Abbott H. Thayer.

In speaking of Mr. Thayer's efforts in this matter, Mr. Dutcher wrote in *The Auk* (1901, page 76): "The thought of this special [warden] protection was his alone, and his unflagging and unaided energy and tact secured the sinews of war, a fund of over \$1,400, with which wardens were paid; without this fund, nothing could have been accomplished. Where he should have received encouragement (*i. e.*, among the ornithologists) he met with discouragement, for he was told that it was impossible to raise any funds for the work. By his personal courage and faith he accomplished what others said could not be done."

The moment, however, that Mr. Thayer brought his plans to Mr. Dutcher, he found he had come to the right man. Mr. Dutcher kindled at once, saying: "If you will raise the money, I will see to getting the wardens," and he soon began doing his full share of the money-raising, also. A good deal of it came through advertising in the newspapers.

This was the beginning of the warden system to protect colonies of water-birds, which has had so many interesting developments. For five years Mr. Dutcher and Mr. Thayer continued to gather subscriptions annually for this purpose, and the funds increased in amount each year. In the spring and summer of 1904 the Protection Committee was enabled by means of the "Thayer Fund," to employ thirty-four wardens, that were distributed as follows:

Maine	10
Massachusetts	1

New York	2
New Jersey	2
Virginia	8
North Carolina	4
Florida	4
Texas	1
Michigan	1
Oregon	1

Mr. Thayer's efforts ceased only in 1905, when the National Association was incorporated, and its officers were able to raise funds in other directions, and thus relieve him of what was a loving, though burdensome, service. Mr. Thayer's interest in this phase of bird-protection has always been intense. I recall that one year, when it appeared that the amount of money subscribed was not sufficient to meet the needs of the Committee, Mr. Thayer, although in no sense a wealthy man, promptly sent his personal check for \$1,000, upon receipt of a letter from Mr. Dutcher telling him of the financial situation.

To Dr. George Bird Grinnell will ever belong the credit of having created the term "Audubon Society" and for starting the first Audubon movement, in 1886; while the name of William Dutcher will be held in memory by the bird-lovers of this country as the man who later founded the National Association of Audubon Societies, gave it form and purpose, shaped its policies, and directed it into many of the lines of activity still pursued. The extent of a man's usefulness to a cause often depends upon his ability to instill enthusiasm into the minds of others, and, by drawing additional workers into the field, multiply the activity of his own hands. Such a leader was William Dutcher, and one of his earliest and most useful co-workers was Abbott H. Thayer, naturalist and artist.



WHY WARDEN WORK IS NECESSARY

The Remote Cause

From *Life*

The Immediate Cause

AUDUBON WARDEN WORK

From the time when Abbott H. Thayer, back in 1901, first directed public attention to the value of guarding and protecting breeding colonies of water-birds, the Audubon Society's effort in this line has increased annually. At the present time, our wardens guard almost every colony of importance on the islands and beaches of the Atlantic and Gulf coasts of the United States. Many nesting colonies in the interior of the country likewise receive this protection.

During the summer of 1913, about 2,000,000 water-birds, embracing many species, are believed to have been gathered in the rookeries, made safe from human intrusion by the National Association's agents. The most hazardous positions in connection with this work are held by

those wardens who in the Southern States stand guard over the colonies of White Egrets.

Thanks to the very liberal support which the members and friends of the Association have provided during the past few years, we have been able to seek out these colonies, which are usually hidden deep in the cypress swamps, and safeguard them during the season when the birds bear plumes. Some killing, of course, still goes on, especially at the feeding-grounds, miles away from the rookeries, but the great slaughter in the United States has been checked. Already the birds are showing a marked increase in several important regions of the South. We may yet be able to bring these birds back in great numbers.



ROYAL TERNS NESTING ON BATTLEDORE ISLAND, LOUISIANA
Protected by Warden Sprinkle in the Audubon patrol-boat *Royal Tern*
Photographed by Herbert K. Job



BLACK SKIMMERS PROTECTED ON GRAND COCHERE ISLAND, LOUISIANA
Photographed by Herbert K. Job

TERNs KILLED BY DOGS AND CANNON

Illustrated from photographs by Herbert R. Mills, M.D.

Haddock Rock is a small island, about an acre in area, lying in the outer portion of Casco Bay, about seventeen miles northeast of Portland, Maine. It is composed of rock, and is cleft and broken at the base, but rising about thirty feet into a fairly level table-land. There is no vegetation on this storm-swept eminence except the slippery rock-weed clinging to the tide-washed base, and a stunted growth of sea-plantain (*Plantago decipiens*) occupying the scanty soil in the crevices above the breakers. Until the summer of 1913,

the residents of Casco Bay took his dogs over to Mark Island and turned them loose. At this time many hundred young birds were on the nesting-grounds, unable to fly, and the dogs devoured them to the last bird.

The following season (1912) the much-depleted colony returned to the same breeding-grounds, but only to have the same pack of dogs destroy their eggs and young; and, reduced to two hundred pairs of birds, the colony returned to Casco Bay, in 1913, to try their luck on Haddock



HADDOCK ROCK, CASCO BAY, MAINE

birds were not known to breed on this little island, but during the past season two hundred pairs of the common Tern attempted to raise their young on Haddock Rock. This was an overflow colony from one of the islands protected by wardens employed by the National Association.

Casco Bay is dotted with islands, and many of them were formerly occupied by sea-birds, but the encroachments of civilization had gradually crowded the wild birds back until the only breeding colony left was a few hundred Terns on Mark Island, not far from Haddock Rock. For several seasons the birds held their own on Mark Island, and it seemed as if they had at last found a safe refuge, since this island is unoccupied government land; but, during the summer of 1911, one of

Rock, there to meet another tragedy, which I will now relate:—

On July 30, 1913, I landed with much difficulty on the treacherous base of Haddock Rock. Climbing to the level summit-plateau I found hidden in the crevices five young Terns about seven inches long, feathered out on the back and wings, although they still had down on the head and underparts. Among the sea-plantain I found twenty-five nests built upon thin soil with a few stems of dried vegetable fiber, and containing sets of one and two eggs each (one with four). I was at once impressed with the dull appearance of the eggs and, upon examination, found them to be very light in weight. I then opened every egg in the rookery (with the exception of the set of

four) and found about half of them to contain the dried bones of embryonic birds, which I calculated must have been killed six weeks before. The rest of the

times, and their state of preservation showed this to be six weeks and one week previous to July 30. I then recalled that the Naval Station at Diamond Island,



NEST AND EGGS OF COMMON TERN ON HADDOCK ROCK

eggs contained embryos, which were still in an only slightly decomposed condition, and appeared as though they had been dead about a week. Many of the eggs were just ready to hatch at the time they were killed—in fact, some of them were pipped. The set of four which I did not open appeared so bright, and the nest was in

twelve miles nearer Portland, had engaged in target-practice on July 23, and I later learned that target-practice was held at this station during the first week in June. The correspondence of these dates with the time the eggs were killed on Haddock Rock is itself significant; and, when I recall the fact that the atmospheric shock



YOUNG COMMON TERN HIDING ON HADDOCK ROCK, JULY 30, 1913

so good repair, that I was encouraged to believe that they had been recently laid.

The point I wish to emphasize is that all the eggs showed conclusive evidence that they were killed at only two different

from this cannonading jarred the windows of the houses on Baily Island, near Haddock Rock, I am satisfied that it was this aerial vibration from the cannonading on Diamond Island that killed the eggs on

Haddock Rock. Moreover, I was told by fishermen on Baily Island that they were unable to raise chickens on their island if cannonading occurred during the incubating period. In both these cases, the islands affected were almost directly in front of the guns, where the shock is greatest.

Since target-practice is held only at comparatively long intervals, the time could easily be arranged so as not to conflict with the incubation-period of the Terns, which require only about six weeks from the time the first egg is laid until the last one is hatched. Arthur H. Norton, the field-agent for Maine of the National

Association of Audubon Societies, informs me that the Common Tern deposits its eggs from June 15 to 30, a few a little earlier, perhaps, and many later. According to this, the last eggs would undoubtedly be hatched by the end of July. If, therefore, the District Commander would set the time for target-practice in accordance with the above dates, there would be no further trouble from this source. Such action would practically complete the effectiveness of the work of the National Association's string of eighteen wardens guarding the seaboard colonies on the coast of Maine.—HERBERT R. MILLS, M.D., *Tampa, Florida.*

A WOMAN GAME-WARDEN

No one is surprised in these days at a woman's attempting any sort of a task in a field heretofore regarded as belonging exclusively to man, nor is there doubt of her ability to succeed—simply a momentary surprise at the novelty of some of her undertakings. This pleased wonder yields to admiration as one reads of the very valuable service Mrs. L. H. Bath is doing as a protector of wildfowl, and as a terror to lawbreakers, at Klamath Lake. This great body of fresh water and marsh, on the boundary between California and Oregon, is one of the most extensive and populous feeding-places and breeding-resorts for wildfowl in the whole country, and it is especially important to bird-life in that region, where a great part of the surrounding area is arid. The traditions of the abundance of bird-life thronging there half a century ago are almost incredible; but latterly reckless slaughter by market-gunners, and by careless farmers and sportsmen, had so depleted these numbers that, in 1908, it was necessary to include the lake in a federal game preserve in order to save the remnant of the wild life. The regions of the lake where water-birds chiefly breed have since been patrolled by a warden in the National Association's patrol-boat *Grebe*. This made little difference, however, to the

market-gunners in the neighborhood of Klamath Falls, who often came as before, or to some local men and boys who had been accustomed to kill Ducks and rob nests, regardless of law or gospel. Such local guardianship as was attempted was often defied, therefore, until Mrs. Bath became game-warden in the autumn of 1912.

Soon she made everyone, neighbor or stranger, understand that illegal shooting must stop. She went at the work, woman-fashion, to explain its need and work up a favorable sentiment. She made her rounds of lake-shore and stream, and sometimes had to interfere with shooters, but her firmness and persuasiveness and grit carried her through without making an arrest. That real trouble would follow otherwise was plainly felt, however; and now, as an eye-witness writes, "Birds are as safe in Mrs. Bath's district as they are in her back yard."

One of her channels of influence has been through the children, whose regular amusement it has been to throw stones at the birds, which, to their uninstructed minds, were swimming there as heaven-sent targets. Mrs. Bath uprooted that error and planted a better idea in their thoughts, so that soon the children were feeding the birds instead of stoning them, and were watching against trespassers.

Mrs. Bath has also exhibited what influence may be gained over wild waterfowl by a quiet and habitual kindness that displaces their suspicious fears. She has tamed Grebes, Gulls, and certain wild Ducks, so that they recognize her and do not flee upon her approach. Coots hasten to flock about her when she calls, and she has taught some of them—wild birds—to take food from her fingers. She has so impressed the people of the town of

held them up for the inspection of the Pelicans, and they at once became very much interested. By careful coaxing, they came a little nearer each day. Finally I coaxed them to eat from my hands, and after days of patient working with them I was delighted to have one of them fly on the dock and stand and look at me. Fortunately, I had a fish in my hands, and I held it so the Pelican could see it. He seemed determined to get that fish,



MRS. BATH AND HER FRIENDLY PELICANS

Klamath Falls with the propriety of safety for wildfowl in the close season that last year more than fifty wild Ducks were hatched on the river-banks within the limits of the city. This friendly public influence was strongly tested when six White Pelicans came to town, and seemed inclined to settle there. Mrs. Bath relates what followed:

"I immediately cautioned everyone to be extremely careful not to frighten them in any way. They seemed to be full-grown, and, as near as I could tell, were probably early spring birds and parents, as it was about the first of August when they came. I got some live chubs and

and followed after me the distance of a block. I finally gave him the fish, and stood perfectly still, and so gave him plenty of time to walk to the edge of the dock and get back into the water. I knew then that he would come back.

"He came every day about the same time, and I always was there with a fish for him. After ten days of patient working with him, I was rewarded by having the rest of the band come on the dock, and now they follow me anywhere."

We extend to Mrs. Bath hearty compliments and congratulations upon the pluck and the success with which she has managed her difficult role.



OFFICERS AND PROMINENT MEMBERS OF THE INDIANA AUDUBON SOCIETY

Top row: Dr. D. W. Dennis, W. W. Woollen, Harriet B. Audubon. Below: Amos W. Butler, Judge McBride, Miss Downhour (Secretary)
G. S. Clifford, Edward Barrett, Stanley Coulter (President)

Indiana's Good Example

The perennial vigor of the Indiana State Audubon Society was shown in its May meeting, this year, at Evansville. This society profits by the policy of holding its annual meetings in different cities, thus stimulating interest throughout the state. Evansville was a fortunate choice, since Audubon himself lived and studied in that neighborhood for several years previous to 1824.

The visiting state society was publicly welcomed in Evansville at the evening meeting on April 30, and the retiring president, William Watson Woolen, made a historical address. This was followed by an illustrated lecture on local birds by Amos W. Butler; and this and the other meetings were enlivened by music. On the morning of May 1, "bird-talks" were given in every school, public or private, in the city, and much enthusiasm was aroused among the children.

This is a feature of the program which might well be imitated elsewhere.

The afternoon of this pleasant day was devoted to an excursion to Henderson, where the house in which Audubon lived, and the foundation of the mill that embarrassed him during many troublous years, may still be seen.

The presence of Miss Harriet Audubon, granddaughter of the ornithologist, among the guests, added peculiar interest to this excursion. In the evening, addresses were given by Dr. D. W. Dennis, of Earlham College, and by Prof. Stanley Coulter, of Purdue University, the latter discussing methods of bird-work in the schools. All of the sessions were largely attended. Professor Coulter was elected president of the state society, and Miss Elizabeth Downhour reelected secretary. The Evansville society has as president George S. Clifford, and as secretary, Miss Lida Edwards. Dr. Eugene Swope, the National Association's field-agent for Ohio, attended the meetings, and sent to the home office the photograph of some of the prominent members present, which is reproduced in this issue.

Bobolinks May Be Slaughtered

It is with profound regret we learn that those responsible for making the regulations under the McLean Migratory-Bird Law have been forced by pressure from the killers of song-birds to open wide the door permitting the killing of Bobolinks in certain states where they were protected last year.

It will be recalled that, under present state laws, Bobolinks could still be killed in several eastern and southern states. Under the Federal regulations, which went into operation last year, the slaughter was made illegal in much of this territory.

Gunners in certain parts of Delaware, eastern Pennsylvania, and New Jersey, who represented *only seven counties*, have had all this upset, and on September 1, 1914, the old system of butchering Bobolinks will go on as before, if President Wilson signs this new order. Below is a "news-letter" recently sent to the daily papers by the government officials who have authorized this backward step, as we strongly feel it to be:

Washington, D. C. — Notices have been issued by the U. S. Department of Agriculture calling attention to a proposed amendment in the federal regulations for the protection of migratory, insectivorous birds. Under the new rule, reed- or rice-birds can be shot in September and October in the states of New Jersey, Pennsylvania, Delaware and Maryland, the District of Columbia, Virginia and South Carolina. The law requires three months' notice of this change. If it is decided to adopt it, the rule will be officially promulgated at the end of that time, and will go into effect on September 1, 1914.

The effect of this change will be to extend to sportsmen in New Jersey, Pennsylvania, and Delaware the privilege of shooting the birds during a period of two months. This they may now do in Maryland, the District of Columbia, Virginia, and South Carolina. As the season is so short, it is not believed that the birds will suffer appreciably in numbers. In the late summer and early fall they migrate to the far south, where they are known as reed- or rice-birds. They are regarded in the states where they can now be shot as offering good sport.

THE FEDERAL MIGRATORY-BIRD LAW IN THE COURTS

Two prosecutions for violation of the McLean Migratory-Bird Law, which have come into the federal courts of late, have attracted much attention because of their bearing on the much-mooted question, whether the law is constitutional. In one of these cases, the presiding judge declared in favor of the law, while the other held the act to be unconstitutional, and, therefore, not binding on the people. The facts of these cases briefly are as follows:

On April 18, 1914, Alfred M. Shaw, a banker and prominent resident of Delmont, South Dakota, was arraigned before Judge J. D. Elliott in the federal court, and pleaded guilty to an indictment charging him with violation of the United States laws regarding the shooting of migratory game-birds. He was fined \$100. The fine is the first obtained for violations of the law in that state. A lawyer questioned the constitutionality of the law, but the court held that there was little doubt of its validity.

The other case occurred in Arkansas. On May 28, 1914, Judge Jacob Trieber, in the United States District Court for the Jonesboro Division of the Eastern District of Arkansas, rendered an opinion adverse to the law. The case is recorded as *United States vs. Harvey C. Shauver*. Shauver killed birds in violation of the McLean law, and was indicted for the offense. The Government was represented by W. H. Martin, United States District Attorney, and by Col. Joseph H. Acklen, of Tennessee, a member of the Advisory Board of Directors of the National Association.

The defendant demurred to the indictment, and this was sustained by the Judge. His decision was written at considerable length, in which he cited many previous court-decisions. In summing up, he states, in part:

The claim that the migratory birds are the property of the United States must be held untenable. It is also argued that Congress has frequently exercised the

power to regulate matters which could only have been done under the general police power, and the validity of these acts, when attacked, as beyond the power of Congress, has been upheld. Counsel refers to the lottery acts, the anti-trust acts, the national railway legislation, the safety-appliance act, the quarantine laws, the pure food and drug act, the act regulating mailable articles, and other acts of similar nature. But every one of these acts was upheld under some provision of the constitution, either that of the Post-office Department, the commerce clause, the taxing power, or some other grant. Whenever Congress or the head of a department went beyond that power, as by including intrastate carriage with interstate, the acts were declared unconstitutional.

It may be, as contended on behalf of the Government, that only by national legislation can migratory wild game and fish be preserved to the people, but that is not a matter for the court. It is for the people, who alone can amend the constitution, to grant Congress the power to enact such legislation as they deem necessary. All the courts are authorized to do, when the constitutionality of legislative acts is questioned, is to determine whether Congress, under the constitution as it is, possesses the power to enact the legislation in controversy; their power does not extend to the matter of expediency. If Congress has not the power, the duty of the court is to declare the act void. The court is unable to find any provision in the constitution authorizing Congress, either expressly or by necessary implication, to protect or regulate the shooting of migratory wild game when in a state, and is, therefore, forced to the conclusion that the act is unconstitutional. The demurrer to the indictment will be sustained.

About three weeks after rendering the above opinion, Judge Trieber, yielding to the plea of counsel, agreed to re-open the case, so there is a possibility that in the end he may be led to reverse his own former decision.

Now what will be the practical effect of these two decisions? In the North Dakota case, a precedent has been established, which all bird-protectionists will applaud, and which will have a tendency to strengthen the law. In the other case, it will mean that probably no further

efforts will be made to enforce the federal migratory-bird law in the Eastern District of Arkansas until Judge Trieber's decision has been reversed by a higher court. It will take a year, or perhaps two years, to carry a case up through the courts and get a final decision from the United States Supreme Court. In the meantime, however, the bird-protection treaty now pending between this country and Canada may be signed. According to the reported opinions of Elihu Root and other constitutional lawyers this would then take the subject entirely out of the courts, and the treaty agreements would prevail. It is clear, therefore, that the very important task of impressing the United States Senators with the wish of the American people that the treaty be ratified now devolves upon bird-lovers.

Legal Struggles in Maryland

In reference to recent wild-life legislation in Maryland, W. Scott Way, reports:

The new general law appears to have repealed all local laws conflicting with it, in which case the state will have a uniform season for the more important species. Another measure, repealing and reenacting the non-game-bird law, shows some improvements over the old act, but is not as it should be. I see no reason why the Legislature could not have been induced to pass the Model Audubon Law, while it was about its tinkering, but the state game-warden, with whom I took the matter up early in the legislative session, persuaded me that there was no hope for success along that line; and, as there seemed to be a general indifference on the part of everybody concerned, save Miss Starr and myself, I let the matter drop.

I regret that the effort to put through a hunting-license law failed because of strong opposition from many counties. The politicians seem to be afraid of it, but, at the next session, with the right kind of force behind it, I believe it can be put through. My observation has been that at the past three sessions of the Maryland Legislature failure has been mainly due, in the matter of up-to-date game and bird laws, to the lack of the right sort of man at Annapolis. An effort was made to remove protection from the Turkey Buzzard, but by active work, in

which I was aided much by Dr. Henry Oldys, I succeeded in having this measure confined to the town of Easton, where the proposition originated. This will, therefore, do little harm.

Mutually Satisfactory

The accompanying capital photograph illustrates admirably the Audubonian way of "killing two birds with one stone,"



TWO DELIGHTFUL GUESTS

Photographed by Carl E. Purple

—a shot from a camera. The parallel, indeed, is double. The photographer fed two birds at once, and took their pictures for his pay, using but a single plate. This was as economical as the result is pretty. Both parties to this amiable arrangement were perfectly satisfied. The photographer gets his credit; the Woodpecker is living on the fat of the land; and the Nuthatch may be said to be in clover. The lesson of the picture is as obvious as is its beauty.

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REPORTS FROM WORKERS IN THE FIELD

Progress in Florida

One of our most active workers in Florida is Dr. Herbert R. Mills, of Tampa. He is constantly on the alert, and is always doing useful and interesting things for the birds, as is indicated by the following communication:

"I have been noting the results of the Junior Audubon work here in Tampa, and I am greatly impressed with the immense

that might not be reached in any other way. For example, I was on one of the Favorite Line excursions a few weeks ago, and I overheard a lady remark to a friend: 'Since Margaret joined the Audubon Society, she simply can not wear her aigrettes any more.' These things are so encouraging that I have decided to devote a large share of my spare time next fall to organizing Junior Audubon Classes in Tampa.



THE CARDINAL DETAINED AS EVIDENCE

value of this work. I organized a few classes here this winter, with a total membership of over three hundred, and every day I see some example of the good results obtained. Recently I saw a couple of boys fighting, and later learned that one was a sixth-grade Junior Audubon boy who was beating a fellow for killing a Warbler of some kind. And not only is our game-warden service being thus increased by this work, but our campaign of education is being carried into homes

"Some time ago, I sent you an account of the arrest of the Italian, Frank Alfino, for selling Cardinals and Mockingbirds. I am enclosing you a print of the Cardinal which I bought from this man for evidence. This picture was taken just before the bird was given its liberty under the orange tree from which the cage is suspended. I later learned that the bird found a mate soon after gaining his liberty, and is now raising a brood of little ones. This Cardinal has no toes on his right foot."

Good Sentiment in Rhode Island

The Association's field-agent for Massachusetts, Winthrop Packard, has been able to do much work outside his state of late. A practical report of his efforts in behalf of helpful legislation in Rhode Island is here given:

"The Rhode Island law, making the state law agree with the federal law on migratory birds in the matter of seasons for shooting, passed without an amendment. There was some opposition at the last moment, but it was all swept aside. The law forbidding the shooting of Ducks from motor-boats, which the Newport Gun and Game Protective Association originated, was passed, and the bill making Warwick Neck a bird-reservation for five years, also went through. There seems to have been, this year, a great change in sentiment in favor of bird-protection in Rhode Island. Much of the good work has been done by Dr. Horace L. Beck."

Views of Teachers

A group of Ohio teachers who have tested bird-study, as promoted by the Junior Audubon classes, have favored us with the result of their experience. All approve of it, and speak of the real enjoyment taken in it by themselves as well as by the pupils. "It is surprising," Miss Wolff, of Norwood, exclaims, "how much the children find out for themselves. In a great many instances I learned from them fully as much as they learned from me."

"I found bird-study fascinating both for myself and the children," a Sharonville teacher, Miss Doepka, writes. "The mental training received was greater than from any other study, especially in developing their powers of observation. The information received was useful, as it showed them that birds are of great benefit and all should join in protecting them. As the information your leaflets give is not abstract, but such as children can observe for themselves, it is retained as well, if not better than any other."

This last point is emphasized by a principal, who says that his experience shows that children retain useful information longer than other. "An excellent test of

the retention of this information," Miss Aler, of Mt. Vernon, thinks, "may be shown by unexpectedly asking children to write ten-minute' compositions on 'The Robin' or the 'Baltimore Oreole' without having an opportunity to look up anything in connection with the topic, and then reading the splendid compositions turned in." The value of the study in training the children in English composition is remarked upon by many teachers, who find good models and great help in the leaflets. The keeping of notes of observations is recommended from experience by several correspondents. One of these, Miss Cameron, of Salem, says:

"I am glad to express myself as more than satisfied with results of bird-study in the school. It was taken up in connection with the English lesson once a week, and in no period of the week's program was the interest of the pupils more deeply centered. I was a student with the children when it came to this lesson, and I know that all were in love with the study. It has been the means of creating a very desirable spirit in the school. The children are more attentive, more thoughtful of the feelings of others, more kind-hearted to all living creatures, and are eager to do something that will count for happiness or betterment in the bird-world, and hence, in our own."

The two succeeding letters come from teachers more advanced than are most of them in a knowledge of zoölogy.

"I have always been interested in birds," writes Ruth Buckingham, of Loveland, and have a picture-collection of over fifty different species found in this part of Ohio. I keep this collection where the children can have access to it, so that when they have a few spare moments they may get a bird and try to draw it with the colored crayons I give them for that purpose. I do not try to stuff the children with information. I try to get them to find out things for themselves."

This last one is from a principal, W. N. Thayer, of Norwood: "I have been giving incidental instruction in bird-study in connection with our work in biological nature-study, for some years past, and I have found the Audubon leaflets and pictures valuable supplements."

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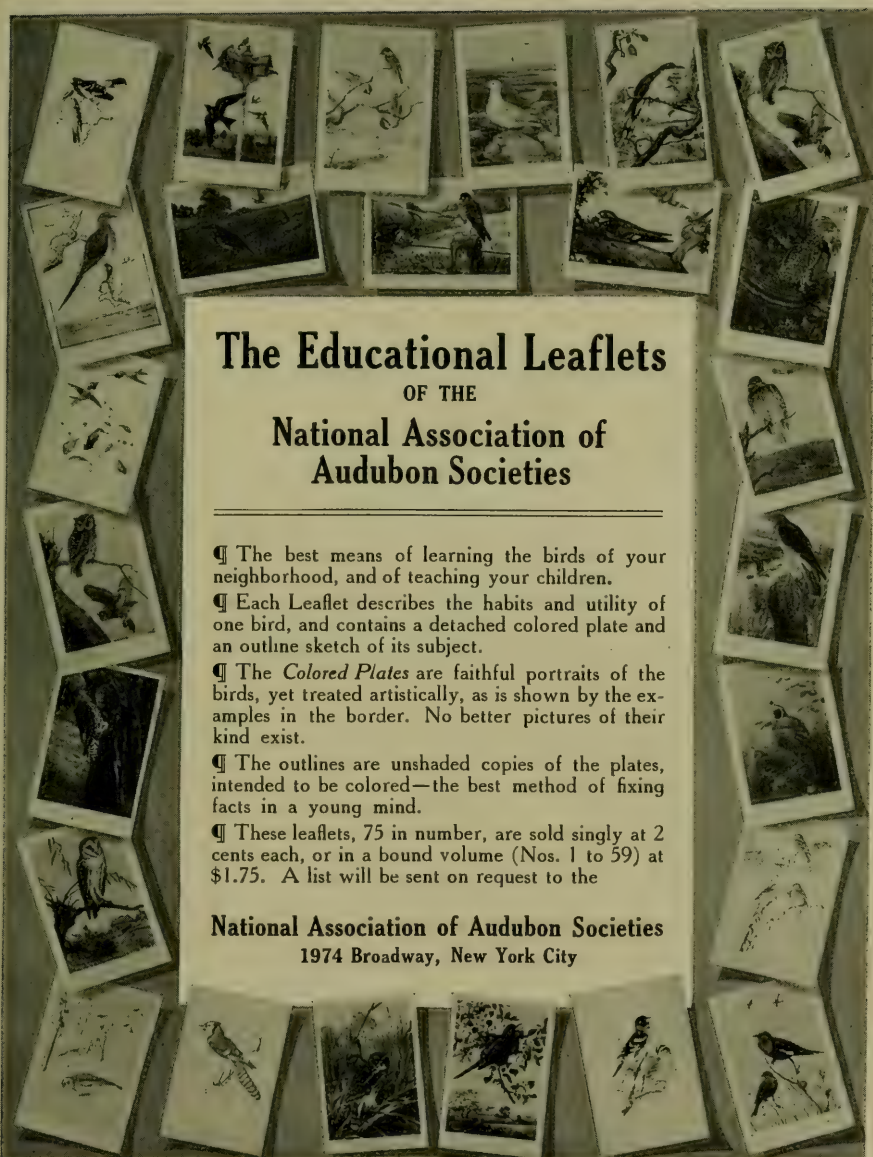
A DEPARTMENT OF APPLIED ORNITHOLOGY; THE CRUISE OF THE AVOCET (Illus.); HOSTS OF HERRING GULLS; TERNS AND THEIR TROUBLES; ELUSIVE PETRELS; OTHER BIRDS; WHAT ABOUT THE CAT (Illus.); SENATOR GEORGE P. McLEAN (Illus.); MAKING PORTLAND A BIRD CITY (Illus.); FIRST BIRD FIELD-DAY; MRS. HARRIET MYERS AND THE CONVALESCENT PHAINOPEPLA (Illus.); THE LAST PASSENGER PIGEON (Illus.); BIRDS AND THE ARMY-WORM; STATUS OF THE TREATY WITH CANADA; NEW MEMBERS AND CONTRIBUTORS; GENERAL NOTES.		384
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Vol. XVI

SEPTEMBER—OCTOBER, 1914

No. 5

Some Observations on Bird Protection in Germany

By WILLIAM P. WHARTON

With photographs by the Author

IN August, 1913, the writer had the good fortune to make a brief visit to the estate of Baron Hans von Berlepsch, at Seebach, district of Langensalza, Germany, and to observe something of the methods for attracting and protecting wild birds employed with such wonderful success there. For a full description of these methods, the reader is referred to the book entitled 'Methods of Attracting and Protecting Wild Birds,' which, in its English translation, is for sale by the National Association of Audubon Societies.

Those familiar with that book are aware that the Baron's success rests upon three cornerstones: (1) Large numbers of suitable nesting-sites both for birds nesting in cavities and for those nesting in trees or shrubs; (2) an abundant food- and water-supply; (3) protection from their enemies. To supply the first, Baron von Berlepsch devised the nesting-box made by hollowing out sections of tree limbs or trunks in as nearly as possible exact imitation of the cavities excavated by Woodpeckers; boxes of this kind are now being manufactured by two or three different persons in the United States. The Baron also devised, after much study and experimentation, a method of pruning undergrowth and special plantations of shrubbery in such a manner as to produce 'whorls' of side branches at a given point, which, by subsequent pruning, form a natural platform or crotch particularly suited for birds' nests to be placed in. Food in the form of suet and various seeds is provided, in winter, at various points on the estate, and is often placed in the shelter of the Hessian food-house, very similar to the Audubon food-house now being sold in this country. In summer, besides the natural supply of insects, which must be large in the dense undergrowth and about the pond and brook, groups of shrubs and trees, planted for that purpose, supply a rotation of berries and seeds especially liked by birds. Owing to the presence of the pond, and the brook running through the estate, artificial bird-baths are not much required. Protection from enemies requires constant vigilance in destroying the predatory quadrupeds, such as weasels, squirrels, polecats and house cats, and such pred-



THE CASTLE FROM THE PARK; ESTATE OF BARON VON BERLEPSCH
The trees and shrubs on each side of the vista are filled with birds' nests

atory birds as have been found to prey especially on their own kind. The methods used in carrying out the purposes above stated are given in some detail in the book.

In visiting Seebach, the writer had in mind, by seeing for himself the results of this remarkable experiment, to supplement and make more practical such knowledge as he had already acquired from reading the book. Unfortunately,



VIEW OF THE HOME PARK FROM THE TOP OF THE CASTLE. ESTATE
OF BARON VON BERLEPSCH

there was not sufficient time to make any careful study, and the weather was such as to render the taking of satisfactory photographs difficult or impossible. Notes were made more especially on practices, or modifications of practices, which have either been developed since the book was written, or were not fully described therein.

The nesting-boxes are probably the most conspicuous and interesting devices to the average visitor, especially to the American who has already become familiar with them in his own country. These are scattered everywhere through the home park and adjacent woods, and also in the forest, which is situated at

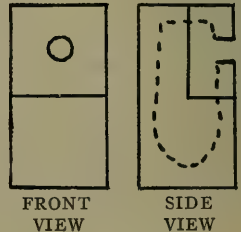
a distance of some six miles from the castle. They are, as a rule, of the regulation sizes and shapes as described in the book, being imitations of the cavities excavated by Woodpeckers, and about 90 per cent are said to be occupied each



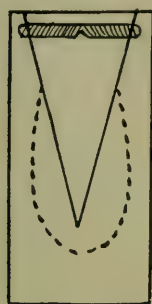
ONE OF THE CEMENT-BLOCK NEST-BOXES IN THE WALLS OF THE CASTLE; HERR FRIEDERICH SCHWABE, IN CHARGE OF THE SCHOOL OF BIRD PROTECTION, STANDING NEAR IT.

The nesting-holes in the walls of the castle are made wholly of cement, being in the form of blocks, which fit into spaces from which the stone blocks have been removed. These cement block boxes are in two parts, one being three-fourths and the other one-fourth of the whole. The larger contains the whole of the lower portion of the cavity and the rear half of the upper portion, and is set permanently into the gap in the wall. The other quarter contains the front half of the upper portion of the nesting cavity together with the entrance hole, and may be easily removed by

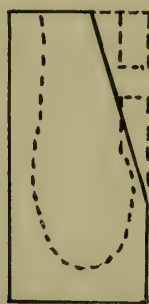
year. A modification, however, has been made in the covers to these boxes, which should be of special interest to New Englanders living within the region infested by the gipsy moths. In order to make the interior easily accessible, both for cleaning it out and for purposes of observation, the regular wooden cover, held in place with lag screws, has been discarded, and one of cement is now used. This has a projection or flange below, which fits loosely into the top of the box, and prevents the cover sliding off; the weight of the cement is sufficient to prevent its being blown off.



inserting the finger in the latter, and the contents of the interior be thus exposed to view. In the upper stories of the castle, where the walls consist of a single thickness only of wood, entrance-holes of the proper size have been bored in the walls, and the ordinary type of nest-box hung on a nail inside, after the upper front of the box has been sawed off diagonally, thus:



FRONT VIEW



SIDE VIEW

SIDE VIEW IN
POSITION ON
WALL OF CASTLE

A narrow iron band, with a notch in the middle of the lower edge to receive a nail, is fastened horizontally across the upper part of the saw-cut, and the box is then hung on the nail driven into the side of the castle just above the entrance-hole. These boxes are said to be more favored by birds than those conspicuously placed on the outside of the castle wall, and have the great advantage that they are easy to inspect and clean out. Baron von Berlepsch plans to insert a pane of glass in the rear of some of these boxes opposite the nest, surround them with a dark closet; and study by this means the feeding of the young. These boxes in the walls of the castle are used almost entirely by Starlings.

In the Hainich forest, where the birds, attracted by Baron von Berlepsch's methods, saved his trees from defoliation by caterpillars in 1905, when the surrounding forests were stripped, there are several thousand nest-boxes. These are chiefly in the deciduous woods, which are composed largely of beech and oak. Here they are hung not less than thirty paces apart, and approximately 90 per cent are said to be occupied annually. In the dense spruce woods it has been found impracticable to place boxes, except on the edges of small clearings or partial openings. In such places, an experiment has been tried of placing four different kinds of boxes close together, in order to ascertain which kind is preferred by the smaller Tits. A box of earthenware has been found to be useless. The other three boxes are of the usual pattern, and two of them of stock sizes—A and B. The third is a B box with an A entrance-hole—that is, a good-sized box with a small hole,—and for this the Tits have shown a decided preference. Evidently they like roomy quarters better than cramped ones, provided the entrance is small enough to keep out larger birds. In an old apple orchard here behind the forester's house, two and sometimes three boxes of

different sizes hang on the same tree, and two are often occupied at the same time, according to Herr Schwabe, the head of the von Berlepsch School of Bird Protection.

Because of their novelty as well as their remarkable success, the shelterwood plantations, with the special pruning of stock bushes for nests, was of particular interest to the writer. The form of these plantations, and the species of plants used in them, are carefully described in the book already referred to; but subsequent experiments have somewhat extended the list there given of plants suitable for pruning. Baron von Berlepsch still prefers *Cratægus oxyacantha* to any other thorns for this purpose, but he finds that the common privet (*Ligustrum vulgare*) is of value as a stock bush in poor soil under considerable shade,



THE ANCESTRAL CASTLE FROM THE PARK; ESTATE OF BARON VON BERLEPSCH
One or more pairs of Moorhens nest about the pond and many other birds in the trees and shrubbery, and cavities made in the walls of the castle.

and that horse-chestnut (*Æsculus hippocastanum*) also does well under larger trees. The yew (*Taxus baccata*) is also used in similar situations. As a general rule, however, the thorn (*Cratægus oxyacantha*) is used for this purpose. After the shelterwood is planted, it is allowed to stand three or four, or even five years, and is then cut down, as described in the book. The effect of this is to make the thorns send up straight shoots from the ground. After two or three years, strong shoots here and there in the plantation are cut off just above several dormant eyes, which, so far as the writer could understand, are to be found in greatest abundance at the point where the growth of about two years previous began. The effect of this pruning is to force out a whorl of new shoots, starting in a generally horizontal direction. The following year, these shoots are cut back to within perhaps a couple of inches of the parent stem, and each

year thereafter the new shoots are again cut back to within an inch or less of their starting points. The effect of this pruning is to form a very secure foundation, or support, on which to place a nest, surrounded during the spring and summer by a dense screen of foliage from the new shoots. That the provision thus made for them is appreciated by the birds was evidenced by the very great number of nests of the year which were found in these whorls. In a double-row thorn hedge along the edge of a wood, which has been pruned in this fashion, the writer counted thirty-one nests in a distance which could not have much exceeded 300 feet,—an average of one nest to every ten feet. The lateness of the hour unfortunately prevented further exploration of this hedge, which



A GENERAL VIEW OF ONE OF THE SPECIAL 'SHELTERWOOD' BIRD-NESTING PLANTATIONS OF SHRUBBERY ON THE BORDER OF A WOOD

extended for perhaps twice the distance beyond, and was said to be fully as thickly populated throughout.

With one exception, all these shelterwoods are connected by lines or blocks of trees or shrubs. The line of poplars bordering the brook, and the method of pruning these trees, are described in the book; suffice it to say here that at least one nest was to be found in almost every tree, and in some there were two. On the opposite side of this brook is a row of lindens (*Tilia parvifolia*), and these trees had been pruned by cutting the branches one foot or more from the trunk, in order to make whorls for nests. Baron von Berlepsch stated that any of the lindens are adapted to this purpose, as well as *Ulmus campestris*, and that they are particularly suitable for planting in rows to connect shelterwood plantations, and along brooks, roads, etc. Another tree suitable for making connections between the plantations is the Norway

spruce (*Picea excelsa*), which is there planted in three rows one yard apart, the middle row being removed after about six years. This removal leaves a



THREE NESTING-BOXES IN POSITION ON THE EDGE OF A SPRUCE STAND IN THE WOODS OF BARON VON BERLEPSCH.

These are for experiments with the smaller Tits, as described herein.

small opening, which is soon arched over, and forms a covered passageway for birds, and an excellent winter feeding-place. The remaining trees should be topped regularly, to maintain this densely covered archway. Mountain ash trees are planted along the row with the spruces, to provide food with their berries. The exceptional shelterwood, unconnected with others, stands in the midst of cultivated fields. This is largely an experiment, and is as yet too young to show results. Most of the others are either under partial or entire shade, or else along the edges between woods and fields, such as that shown in the picture. It should be noted that all nests are thrown down each autumn from the whorls, as well as from the boxes.

The matters of feeding and of control of enemies were given less attention by the writer than they deserved, chiefly because of lack of time. The winter feeding arrangements at Seebach have already been briefly referred to, and are fully set forth in the book describing Baron von Berlepsch's methods. Control of natural enemies is effected largely by

trapping, and to some extent by shooting. An ingenious trap baited with live English Sparrows is used successfully for Sparrow Hawks,—said to be similar in size and habits to our Sharp-shinned Hawks,—which are considered the only distinctly harmful birds of this family. The larger Hawks are not

troubled, and are commonly seen about the grain-fields. Some of the shelter-wood plantations in the home parks are protected by a wire box-trap, with long extending wings of wire mesh approximately at right angles to each other, and only a few feet high. Any prowling creature coming upon one of these wings follows it up to the central trap, and, upon entering, closes the door and is held fast until the arrival of the bird-keeper, who disposes of his captive as may be thought best for the interests of the birds. Great vigilance in this work of vermin control is necessary.



A VIEW OF POPLARS WHOSE BRANCHES ARE CUT BACK TO THE TRUNK EVERY FIVE OR SIX YEARS TO FORM NESTING-SITES. ONE OR TWO NESTS OF THE YEAR WERE TO BE FOUND IN PRACTICALLY EVERY TREE.

In conclusion, it may be of interest to refer briefly to the imitation of Baron von Berlepsch's methods in the forests of Hess and Baden. The writer visited those in the vicinity of Frankfurt, Darmstadt, Heidelberg, Baden-Baden, and Forbach, and, in all except the last, found that active measures were being taken to protect and increase birds because of their economic value in the forest. The von Berlepsch nesting-boxes and feeding-stations and baths were in evidence, especially. It is noteworthy that in the most intensively cultivated forests 80 per cent to 90 per cent of these boxes were occupied; whereas, in the forest at Baden-Baden, where there are a good many old and unsound trees, which doubtless offer natural nesting cavities, not more than 25 per cent or 30 per cent were said to be occupied. At Heidelberg, the Von Berlepsch pruning idea is carried out on single or small groups of shrubs, the object being the protection of these young plantations from insect pests.

An Island Home of the American Merganser

By FRANCIS HARPER, Ithaca, N. Y.

With photographs by the Author

IN THE widest waters of Lake Champlain, between two and three miles off Willsboro Point, on the New York side, lies a cluster of islets, which are known as the Four Brothers. On the east, beyond the Vermont shore, looms the huge mass of Camel's Hump, and the high summits of the Adirondacks mark an irregular western horizon. All of the islets are tree-grown, and several bear also a thick cover of grass. Their shores are strewn with large and small fragments of shale from the precipitous banks, which, in places, rise to a height of thirty or forty feet. The comparative security afforded by an island home attracts to the Four Brothers, in the breeding season, several species of water- or shore-loving birds; and they also receive protection from a warden, whom the owner of the islands employs during the summer months to guard the birds and their nests from human disturbers and thieving Crows.

In early July, 1910, when Mr. Clinton G. Abbott and I spent several days at this delightful spot, the scores of Herring Gulls had nearly finished their nesting; and both old and young Spotted Sandpipers fairly swarmed over the rocky shores and on the higher, grassy portions of the islands. But a far more elusive and more imperfectly known species very soon engaged our attention. The zealous guardian of the birds, William E. Ward, told us of an unknown sort of 'Duck' that was nesting within a stone's-throw of his cabin on House



AMERICAN MERGANSER ON NEST, HOUSE ISLAND, LAKE CHAMPLAIN, N. Y.,
JULY 10, 1910

Island (the westernmost of the group); and we followed him with eager interest toward a cluster of arborvitæ growing at the edge of the ten- or twelve-foot bank. There, in a little nook, which was overhung by the low-spreading branches of arborvitæ and surrounded by projecting roots, we rejoiced to see a female Merganser on her nest.

So accustomed had the bird become to the warden's daily visits that she now remained for a time and very quietly met our admiring gaze. The sharp line across her neck, setting off the rich brown of the head from the ashy gray of the rest of the body, at once determined the species as *Merganser americanus*. From where we stood, we could even note the position of the nostrils well forward on her bill—another specific character, which, however, one very seldom has an opportunity to observe in the field. Some long feathers stuck out from the back of her head to form a sparse yet fairly conspicuous crest.

When presently the Merganser departed from her nest, she disclosed five eggs, which were resting on a mass of down in the midst of a loose collection of sticks and leaves. At less than a yard's distance, the bank dropped abruptly down to the beach, which was a couple of rods in width at that point. This nesting-site on the fairly open ground differs considerably from those described in most of the published accounts, and it very likely represents a modification brought about by the security of its environment on an isolated group of islets. The complement of five eggs was smaller, of course, than the typical number. Another Merganser's nest, which the warden showed us on Middle Island, was situated far under a stump cast up on the rock-strewn beach, and contained nine or ten eggs.



FEMALE AMERICAN MERGANSER FLYING FROM NEST

Late in the following afternoon, I began to approach cautiously toward the nest on House Island, going inch by inch with increasingly deliberate movements. In this manner I was enabled to set up a tripod only fifteen feet from the nest, focus the camera on the sitting bird, and secure a 20-second exposure. Now and then a pugnacious Gull, whose young were probably somewhere near, created a diversion by swooping past my head with a hair-raising *swish* of stiffly set wings, and uttering its angry cry, *a-ka-ka-kak*; but the Merganser appeared little concerned. It was not until I had moved still closer, and was



AMERICAN MERGANSER'S NEST AND EGGS, HOUSE ISLAND, LAKE CHAMPLAIN, N. Y.
JULY 10, 1910

about to make another exposure, that the bird decided to seek safer quarters. She scurried swiftly to the edge of the bank and launched into the air, dropping down close to the water at first, but not settling on its surface until a considerable distance offshore.

The warden told us of a somewhat different manner in which he had seen the bird take her departure from the nest. She would start, he said, in a rather steeply inclined course from the top of the bank, strike the water just beyond the shore-line, and rise up at once (doubtless with a vigorous use of feet as well as of wings) to fly off farther over the lake. This interesting performance on

the Merganser's part may be the more readily comprehended by one who has observed how a Cormorant, when it takes wing from a harbor stake in calm weather, is obliged to 'wet its tail,' as the fishermen say, before it can get fairly under way.

Several times we tried the experiment of leaving the camera set close to the nest, with a covering of green branches, and with a long thread attached to the shutter. Upon one such occasion, I was drifting in a rowboat out on the lake, in order to observe the bird's return. Presently I saw her come flying in straight toward the bank, and rise to a level with its top; but, at the last instant before alighting, she stopped in mid-air and hovered for a moment or two almost in the manner of a Kingfisher. As if not satisfied with the appearances about the nest, she turned and came to rest offshore. It was not long, however, before she winged her way in again, and this time alighted on the bank beside the nest. I felt safe in concluding that she had no land-trail leading to her home under the arborvitæ.

We were dismayed, one morning, to discover that both bird and eggs had disappeared from sight; but a little closer investigation of the apparently empty nest revealed that she had merely arranged a neat covering of down over the eggs, before setting out for a fishing-trip on the lake. One would hardly expect an instinct for *concealing* the eggs in such a way to have been developed in a species that typically nests in holes; in the present case, however, the device both served what was probably its original purpose in preventing the eggs from becoming chilled during the bird's absence, and also kept them safe from the greedy eyes of Crows and Gulls.

The male not only failed to share in the incubation, but did not even come into sight during our stay; and, as appeared later, he probably manifested no interest in the welfare of the young.

I am much indebted to the warden for the use of the careful notes which he made on this Merganser at various times during a period of more than seven weeks. The following extracts (which have been freely paraphrased) make evident the very long period of incubation, and also touch upon one or two points of interest in regard to the development of the young and the mother's care of them. "On June 16, a nest with five eggs was discovered on House Island. Four of the five eggs had hatched by July 14. No further observations were made on the Merganser until July 18, when she was seen with the four young on the south shore of House Island. The mother was very timid, and swam rapidly out into the lake, diving often, while the young seemed to run over the water. They were noticed on several different dates thereafter, being finally seen on August 5 near High Island; the young then dove with the mother."

Impressions of the Voices of Tropical Birds

By LOUIS AGASSIZ FUERTES

Illustrated by the Author

FIFTH PAPER.—TOUCANS, CUCKOOS, TROGONS, MOTMOTS, AND THEIR ALLIES

THE principal sensation one gets in the tropical forest is the mystery of the unknown voices. Many of these remain forever mysteries unless one stays long and seeks diligently. I am very sure that many sounds I now tentatively attribute to certain birds really belong to others, though several are among the striking sounds.

The Toucans are all noisy birds, and for the most part they are all very boldly marked with strongly contrasting colors, all but the small green members of the genus *Aulacorhamphus* being brightly dashed with black, yellow, red, white or blue, with bills as bizarre as they are huge. *Andigena* is commonly called the "Siete-color"—seven color—from his Joseph's coat of black, blue, red, yellow, chestnut, green, and white. *Pteroglossus*, as an entire group, is garbed in the most strikingly contrasting patterns of black, yellow, red, and green, with bills of enormous relative size and painted like a barber's pole. *Rhamphastos*, containing the biggest of all Toucans, with beaks like elongated lobster-claws, of all imaginable and many unimaginable designs in black and yellow, white, red, blue, green, or orange, are themselves principally black, trimmed with a yellow or white throat and breast, and lesser patches of red and white or yellow at the base of the tail. One would naturally suppose that with these flashy colors and their noisy habits and large size, Toucans would be among the easiest of birds to find; but this is far from the case. I think we all found them to be as hard to locate, after their calls had given us their general whereabouts, as any of the birds we encountered. The little green snarlers of the genus *Aulacorhamphus*, whose harsh voice seemed to me to sound like the slow tearing of a yard of oil-cloth, were in many places quite common; but only those whose movements disclosed them ever fell into our hands, for it was about hopeless to discover them when they were sitting quiet among the leafage. The blue-breasted group, *Andigena*, we encountered only once or twice. The only one I saw I got from the steep trail in the Central Andes, and it was to the rattling accompaniment of horns of some fifty pack-oxen we were passing on the narrow road. The excitement the shot caused among the startled beasts gave me other things to think of, at the moment, and I do not now remember whether my "siete-color" had a voice or not. When I finally retrieved him, he was some forty yards or more down the steep and tangled mountain-side. In this connection, it may not be out of place to offer one suggestion in explanation of the great difficulty of locating these large and apparently gaudily colored birds in the tropical woods, and in retrieving them when shot.

To our northern eyes, used only to green leaves seldom larger than our hand,

Aracari Toucans.
(Pteroglossus)

Semi-Collier-Toucan
(Andigena)

Green Toucan-
(Aulacorhamphus)

Little Aracari Toucan

"Dios te deso"
(Ramphastos.)

the extravagant wealth of size, form and color in tropical vegetation offers quite as much wonderment and occupation as do the birds themselves; and here we have a diversion of the attention, however unconscious it may be, that certainly has its effect. Added to this, there are actual variations in the accustomed color of the foliage that repeat with greatest suggestiveness any red, yellow, blue, green, orange, or other color, that may be present on a bird. No Toucan's throat is yellower than the light shining through a thin leaf, and when leaf-forms are further complicated like those of the *Dendrophilum* creepers, by having great holes that let through patches of the dark background or the blue sky, no black-patched Toucan in the foreground looks more velvety than do these leaf-interstices. As for the bizarre bills, they only serve to make it harder; for they bear no resemblance to bill or bird, and simply merge their brilliancy with that of the whole picture they sit in. I don't know how many times I have searched and searched and scrutinized, to find the author of some raucous carping, only to see one of the large Toucans burst away from a perch in plain sight, where he had been all the time. This has happened to me so frequently that I am sure other students must have had the same experience. Perched on a dead stub above the sky line, Toucans, like everything else, are conspicuous in the extreme; sitting quietly within the shade of the forest cover, however varied their patchwork coat, they melt tantalizingly into their setting.

The big, black Toucans of *Rhamphastos* are generally called by the natives *Dios te de* or *Dios te ve*—meaning God will give to you, or God sees you. This is not a confession of faith on the part of the simple native, but a free and lilting transcription of the bird's call. It gives the rhythm and general shape of the sound fairly well. I could analyze it a little more closely by calling it a loud, hoarse whistle, with the words *Tios-to-to* or *Tios, to, to, to*. It has something of the queer quality of a Yellow-billed Cuckoo's song, only, of course, it is much larger and louder. *R. tocard* is the "*Dios te de*," but the name fairly well fits, and is generally applied, to the whole group of heavy-billed Toucans.

The only other group we encountered was *Pteroglossus*, the Aracari Toucans. These are small Toucans, all joints and angles, much given to going around in noisy troops, like Jays. Skilful and jerky acrobats; they are the very extreme of bow-legged angularity. Curious as Jays, they jerk and perk their way up into the branches of some dead tree, their great clumsy beaks and thin pointed tails complementing each other at odd angles. Toucans are all great tail-jerkers, and the Aracarís the most switchy of all. Their harsh mobbing-cries recall some similar sounds made by Jays, but are even louder and much more prolonged. Both are a great nuisance to the hunter, as they follow endlessly, their curious prying screeches and squawks effectually chasing out all the birds requiring more finesse in their approach. I should call their most characteristic noise a rattling, throaty squawk. In any case, it will not take a green hunter long to identify these birds, as they are restless and their

motion will soon catch the eye. I strongly suspect all the Toucans of the habit and ability to slip noiselessly and rapidly away, in case their curiosity is satisfied or their fear aroused. They are capable of making long leaps from branch to branch with their wings closed, like Jays and Cuckoos, only more so. What with their looks, their noises, and their actions, no group of birds has more amusing and interesting new sensations to offer than the Toucans.

The family of Cuckoos has some very interesting developments in the American Tropics. The little Four-wing—*Diplopterus*—heard in the sunny river-bottoms and lower brushy slopes—such places as a Brown Thrasher



ANI

would affect—has perhaps the most insistent voice in his habitat. The commonest is an ascending couplet of notes a semitone apart: *E, F*. This is a sharp, piercing whistle, that gets to be as much a part of the shimmering landscape as a *Hyla*'s notes do of a northern meadow-bog in March. Indeed, the Four-wing's fuller song, which is a long, piercing note, followed after a short pause by an ascending series of shorter notes, awoke a strangely familiar chord, which I afterward attached to the very similar pond-toad call at home. The name Four-wing arises from the curious over-development of the false-wing, or thumb plumes, which in this queer little bird form a sharply defined and separately distensible fan of black, which the bird displays with a curious ducking motion.

The larger brown Cuckoos of the genus *Piaya*, which the natives rather aptly call 'squirrel birds,' from their color and the slippery way they glide

through the branches, I have never heard call but once, though they are fairly common throughout most of tropical America. This one sat in a bare cecropia tree, and did a loud, rough *kek, kek, kek*, repeated twenty times or more, and I at first took it for a big Woodpecker.

It is the little black, witch-like Ani, that is really the common Cuckoo of the open savannas, and abounds over the cattle-ranges and around the villages.



PUFF-BIRD (*Bucco ruficollis*)

There are a great many common native names for these conspicuous little black whiners, the commonest being Garrapatero, or tick-eater. This is almost universal, though in Cuba and Porto Rico it bears, from its obsequious manner and its great thin curved beak, the apt title of Judio—or Jew. They are almost always in molt, and look shoddy and worn, and their peevishly whined “ooo-eek” gets to be a mildly annoying accompaniment to the day’s work.

The Barbets and Puff-birds (*Capito* and *Bucco*) fall naturally into this group, though

they did not give us much to work on as to their notes. *Bucco* was usually found perching quietly on some twig halfway up in the trees along the roadside or pasture edges. All I remember of him is that he had a buzzing sort of scold, and could bite a piece out of my finger when caught in the hand.

The little spotted Barbet, however (*C. auratus*), at Buena Vista, on the eastern foot of the Andes, had a curious little *toot* that was the despair of all of us till Mr. Chapman associated it with *Capito*. *Hoot-oot . . . Hoot-oot* in perfect time—*Hoot-oot* (blank) *Hoot-oot* (blank), almost indefinitely. It was a pervasive sound, about as loud as and very like the individual toots of a Screech Owl, and was given to the invariable accompaniment of the twitching tail, and with the neck humped up and the bill directed downward.



TROGONS (*Trogon collaris* and *Pharomacrus antisianus*)

Every student in the tropics hopes he may soon meet with Trogons, at once the most beautiful and the most mysterious of all the varied tropical birds. Nothing could exceed the richness of their contrasting blood-red underparts,



MOTMOT

white and black tails, and resplendent emerald-green heads and backs. The large *Pharomacrus* Trogons, of which the famed Quetzal is a type, with their delicate yet richly gorgeous and pendulous mantle of feathers, are, for sheer beauty, among Nature's truly great triumphs, and cannot fail to force deep appreciation from the most calloused or mercenary collector. *P. antisianus* has a loud, rolling call, which I put in my notes as *Whee oo, corre o*, done in a round, velvety whistle. When, after quite a long time spent in imitating the unknown note, in the soggy tree-fern forest at the ridge of the coast Andes, this magnificent ruby and emerald creature came swinging toward me in

deeply undulating waves and perched alertly in full sight not far away, I found it hard to breathe, so great was my excitement and joy. We never found it a common bird and only three were seen in all our travel in Columbia.

A close congener of *antisianus*, the Golden-headed Trogon, fails in elegance before this distinguished beauty, though a marvel, nevertheless. Its notes are more commonplace, too, being merely booming hoots, not very loud but quite pervasive. The little banded Trogons, with pink breasts, as well as the yellow-

breasted ones, have very characteristic calls, so like each other that I never learned to distinguish the various species. They all sit quietly on some slender perch or vine-stem, and do their rolling call *ruk, ruk, uk, uk, uk, k, k, k, k*, all on the same note. Here again the tail seems to be indispensable to the performance, and jerks sharply forward under the perch with each syllable. More than once this motion became the index to the authorship of the strangely pervasive and ventriloquistic sound.

One other group of birds has this quiet fashion of softly hooting from some low perch in the thicker and more watered parts of the forest. The curious racket-tailed Motmots have what I call the most velvety of all bird notes. It is usually a single short *oot*, pitched about five tones below where one can whistle. This note is very gentle, though fairly loud, and I think that some persons who do not hear low vibrations very well would often fail to notice it at a short distance. Most of the natives have sound-names for Motmots, and the Maya Indians of Yucatan call the brilliant little *Eumomota* "Toh," and, as an appreciation of the interest, he has come to nest and roost familiarly in the age-long deserted ruins of their former glory.

Indeed, these mysterious, gentle, shy, little birds came to me, at least, to be the living symbol of this great lost magnificence; for the present-day Mayas know naught of the art and history of their great forefathers, whose temples and beautiful buildings are now in utter oblivion and disuse, except as the shelters and dwellings of little "Toh," the Motmot, and his soft *hoot* is the only sound that ever issues from their carved portals.



CANVASBACKS, CAYUGA LAKE, N. Y., FEB. 16, 1913
Photographed by Francis Harper

The Hermit Thrush

Here, on the river, a shining reach,
My love'd canoe and the sunset glow;
Gray rocks inverted in the tide,
Two silver birches that lean below.

Sudden, as twilight gathers round,
And the ripples stir as I drift along,
Close to the bank, where the branches bend,
The Hermit Thrush bursts into song.

Joyous and clear on the quiet air
Peals forth that wonderful silver strain,
Like the sunset bells from the ivied tower
Of some gray convent in far-off Spain.

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In the streets I left an hour ago,
News of battle across the foam—
Strife and carnage in lands afar—
Grief and mourning with us at home;

War's red hand over land and sea,
Ruin that smites the field and hearth;
Thunder of guns on the Northern main,—
Tramp of armies that fill the earth.

Yet here on the river, a shining reach,
Golden ripples that stir and cease,
And clear and sweet through the gathering gloom
The silver voice that sings of Peace!

—*Evelyn Smith.*



The Migration of North American Sparrows

THIRTIETH PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

(See Frontispiece)

· WORTHEN'S SPARROW

Little is known of the distribution of Worthen's Sparrow. So far, it has been taken at only three places: Silver City, N. M., June 16, 1884; Chalchicomula, Puebla, April 28, 1893, and Miquihana, Tamaulipas, June 8, 9, 1898.

TEXAS SPARROW

The lower part of the Rio Grande Valley is the home of the Texas Sparrow, and it ranges here northwest to Fort Clark, and along the Gulf Coast to Corpus Christi, and San Patricio County. It is non-migratory. It also occurs in northeastern Mexico, in the States of San Luis Potosi, Nuevo Leon, and Tamaulipas.

GREEN-TAILED TOWHEE

From its winter home in northern Mexico and along the border of the United States, the Green-tailed Towhee moves slowly northward, occupying more than two months—late February to early May—in passing across the less than a thousand miles from the northern limit of the winter home to the northern boundary of the breeding range. Some dates of spring arrival are: San Antonio, Tex., February 25, 1885; Carlisle, N. M., March 21, 1890; Camp Grant, Ariz., March 6, 1867; Santa Catalina Mountains, Ariz., March 18, 1902; near Fort Lewis, Colo., average April 29, earliest April 27, 1906; Fort Lyon, Colo., April 30, 1885; Beulah, Colo., average May 6, earliest, May 4, 1904; Yuma, Colo., May 3, 1906; Cheyenne, Wyo., May 10, 1889; Pasadena, Calif., April 4, 1896; Murphy's, Calif., April 17, 1877; Carson City, April 25, 1868; Fort Crook, Calif., May 1, 1859; Fort Klamath, Ore., May 17, 1887.

The last one seen in the fall at Fort Lyon, Colo., was on September 26, 1885; Yuma, Colo., average September 26, latest September 30, 1908; Beulah, Colo., average September 22, latest October 23, 1907; Piney Divide, Colo., October 8, 1906.

Notes on the Plumage of North American Sparrows

TWENTY-NINTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Worthen's Sparrow (*Spizella wortheni*, Fig. 1).—Few of our birds have a briefer history than this Sparrow. Discovered in 1884, near Silver City, New Mexico, it is still known from very few specimens taken chiefly in Mexico. Doubtless Worthen's Sparrow is a representative of the Field Sparrow, the western form of which it resembles but, as Ridgway remarks, its tail is shorter, the wing-bands less distinct, the sides of the head are gray, and there is no brown postocular streak. There are no specimens of this bird in the American Museum, and I can say nothing about its changes of plumage.

Texas Sparrow (*Arremonops rufivirgata*, Fig. 2).—Few birds show less change of plumage than does this bush-haunting Sparrow. The male resembles the female; there is practically no difference between the winter and the summer dress, and after the post-juvenal molt the bird of the year cannot be distinguished from its parents.

The juvenal, or nestling plumage, however, is strongly streaked with fuscous both above and below. At the post-juvenal molt apparently only the wing-quills and tail-feathers of this plumage are retained, and the bird passes into its first winter plumage, which, as just remarked, resembles that of the adult.

There appears to be no spring molt, and summer birds differ from winter ones only in being more worn.

Green-tailed Towhee (*Oreospiza chlorura*, Figs. 3 and 4).—In this so-called Towhee, the adult male and female are alike in color, and there is essentially no difference between their summer and winter plumages. The young male, also, after the post-juvenal molt, resembles its parents; but the young female (Fig. 3) in corresponding (first winter) plumage has the chestnut crown-cap largely concealed by the grayish tips of the feathers, and the back is grayer than in the adult.

The juvenal or nestling plumage is streaked with dusky blackish both above and below. At the post-juvenal molt, only the wing-quills, primary coverts and tail-feathers of this plumage are retained, when the young male, as said above, acquires a plumage resembling that of the adults, while in the young female the crown-cap is absent.

The prenuptial or spring molt appears to be confined to the throat and anterior parts of the head. Probably the immature female acquires fresh chestnut feathers in the crown, and with the wearing away of the grayish tips of the winter plumage her crown-cap becomes like that of the adult. Aside from this, the summer plumage differs from winter plumage only through the effects of wear and fading, the upper parts being grayer, the flanks paler.

Notes from Field and Study

Brookline Bird Club

The Brookline, Massachusetts, Bird Club was organized in June, 1913, at a meeting of a handful of people held in the Public Library. It was found, upon inquiry, that there were many residents of the town, both adults and minors, who were interested in the study and preservation of birds, and others who only needed an incentive to become thoroughly fascinated by the subject.

It was further discovered that, while nature-study is taught in the elementary grades of the public schools, the study of birds is almost optional with the teachers, and it remains with them whether or not their efforts are more than superficial. Instructors who are not interested in a subject do not interest their pupils. Brookline has grown with such rapidity during the last ten years that it is no longer a small town of fine residences and large estates. The ornithologist, aside from the fine park system, must now go further into the country to find the rarer birds, and few people know where to go. It was thus necessary, not only to arouse and enthuse, but to lead them to the proper parts of the surrounding country, where the opportunities for becoming acquainted with many species are exceptionally good. The forestry department of the town, than which there is none more efficient in the state, has done fine work under Supt. Daniel Lacey in exterminating many varieties of insect pests. This department also feeds the birds in winter, has put up some four hundred nesting-boxes in different parts of the town, and, after studying the subject carefully, has come to the very logical conclusion that the birds must be protected and encouraged to live in the town if the fight against the insects is to be successful.

The coöperation of this department with the Bird Club has become of much

mutual benefit. At the organization meeting, a tentative plan was agreed upon, and the drawing up of a constitution was intrusted to a small committee. A second meeting was held, the constitution adopted, officers elected, and the club launched. Permission was granted by the trustees of the Public Library for the use of a large room by the new association, bulletin space was given, books on ornithology were bought and set aside for special use, and the privilege of having mail sent there was agreed upon. Publicity was given freely in both of the local papers and the Boston press, so that many applications for membership came from unexpected quarters. At the close of the first year, 500 names are on the membership book. The officers are five in number, president, vice-president, secretary, corresponding secretary, and treasurer. There are seventeen directors, including the officers. The Club has four classes of membership: Life, Sustaining, Senior, and Junior. Life membership is obtained by the payment of ten dollars, and this exempts the payer from further dues. Sustaining membership requires a subscription of five dollars, and the subscriber is not called upon for the yearly fee. Senior members must be over fourteen years of age, and contribute 50 cents per year. Those under 14 years of age are juniors and are charged 25 cents per annum.

The membership dues were placed as low as possible, in order that no one should find the amount burdensome, and that all should receive as much as could be given for the lowest fee.

Walks for senior members were arranged Saturday afternoons, and bulletins giving the date, place, leader, carefare, and and general information, were mailed to each member. These walks were so successful that, another year, two separate walks will be scheduled each Saturday, to accommodate the large numbers that

enjoy them. In the morning of the days on which the senior walks are held the junior walks are listed. Mr. Horace Taylor, who conducts the junior department, gives the children a short illustrated talk about the birds that are expected to be seen on the walk. This talk is given on the afternoon before the walk is taken. The children keep notebooks and their lists of birds, make colored pictures and nesting-boxes, and compete in many ways for small prizes. Where the distance requires the use of the electric cars, a special car is hired. The children average from fifty to seventy-five in number on these little excursions.

One of the most encouraging features of the work is the interest and enthusiasm of the Junior department. The meetings of the Club are held once a month in the club-room at the Library, and consist of a short business meeting, preceding an informal talk or lecture on some phase of bird-study. Mr. Edward Howe Forbush, Mr. Winthrop Packard, and Mr. Ernest Harold Baynes are among those who have addressed the organization during this last year.

The activity of the club was marked with such success from the start that the directors decided to undertake an educational movement on a larger scale. Acting in coöperation with the Forestry Department of the town upon an idea originating with the Milton (Mass.) Bird Club, an exhibition was planned of everything pertaining to the study, conservation, and attracting of wild birds. This exhibition was held in the Public Library.

Through the large room ran an arborway, constructed of the limbs of trees with the bark on. To the arbor were attached all kinds of nesting-, feeding-, and shelter-boxes, and wire racks for holding grain and suet. On long tables on the right of the room were baths of varied construction and size, and large feeding-boxes. Hanging on the wall were samples of the bird-work done by the children in the schools. On the left of the arborway were stuffed specimens of native birds. Some were borrowed from the Fish and Game Com-

mission, and others were loaned from private collections of the president, Mr. Edward W. Baker. A number of his specimens were mounted on the nesting-boxes and limbs of the trees through the arbor, which was particularly pleasing and well represented real bird-life. Another table held a complete exhibit of seeds and berries that our local winter birds feed upon. These were placed in glass jars, giving the name of each, where they could be purchased, and the price. At the rear was a display of the Forestry Department, showing the work of destructive insects, particularly the leopard moth and elm-tree beetle, and illustrating most vividly the necessity of attracting the birds to destroy them. Cases were set up containing specimens of the birds that eat the gypsy and brown-tail moths; others showed the moths in various stages of growth. Pictures of all kinds including a number of originals of Louis Agassiz Fuertes, books, pamphlets, eggs, nests, photographs, charts, and in fact everything bearing on the subject could be found in the room. The exhibition was open for one month from 2 to 9 o'clock p. m., and 3,800 visitors signed the registration book; many others, particularly children, attended. In the morning, the room was open to classes of school children with their teachers.

At the close, the exhibition was loaned to the Lynn and Nahant Bird Clubs, and when it is returned will be made into a permanent exhibit. Each day, a member of the Forestry Department and two members of the Bird Club were in attendance, to answer questions and explain. By a recent act of the state legislature, each town or city is entitled to a bird warden. At the last annual town meeting, Superintendent Lacey, of the Forestry Department, was appointed warden for the town of Brookline. The Bird Club has its own bird warden. We look forward to a more successful and busier year. Walks, lectures, and another exhibit are all planned already, and we intend to keep Brookline foremost in the list of those towns and cities that are working for the interest of

the birds.—CHARLES B. FLOYD, Vice-president, *Brookline, Mass.*

Martins and Other Birds at Greens Farms, Connecticut

We banished the cat and the English Sparrows, and had more birds nesting about the home grounds than we had last year.

Wrens occupied four of the five boxes put up, and their music encircled the house. There were three nests of Robins, one on the lintel of the front door, close against the glass transom. The Kingbird nested for the third season in the same pear tree, and the Brown Thrasher in the syringa in the garden. When I looked into the Thrashers' nest after the eggs hatched, the mother bird dived off a tree branch overhead and struck me fairly in the back of the neck. The young Thrashers spent a good deal of time on the lawn close to the house, and there was no cat to alarm them.

One of the old Robins got the habit of pecking early and late at its reflection in the glass of the cellar window, which is on a level with the lawn. We finally tilted the window to stop the continual pecking.

Many Night Herons passed morning and evening between their roost in the woods across the road to the salt marsh opposite. Their flight-calls were usually answered in chorus by our Canada Geese.

One morning, two Kingfishers came flying up the road with such noisy cries that I rushed to the window. One of them darted around the house and fell exhausted on the lawn, while the pursuing bird passed over the house and disappeared. The fugitive remained on the lawn while I finished dressing, and did not leave until I tried to get close enough to see whether it was a male or a female. I suspect that it was a male, being chased by another male.

Barn Swallows occupied the barn, and Chimney Swifts the chimney. Keeping one of the barn doors propped open all day encourages the Swallows. The Bluebirds used only one of the two boxes put

up; the first pair was discouraged by Sparrows.

Best of all, we had half-a-dozen pairs of Martins. Last year, they left without nesting, as the Sparrows held the Martin house against all comers. By diligent use of the long-barreled, dust-shot pistol, in April, I banished the Sparrows for the summer and the pleasant gurglings of the Martins paid many times for the trouble of fighting the Sparrows.

In this region, the holes of Martin houses must be large enough to let Martins in and keep Starlings out; but the Martins will not enter a one-and-seven-eighths-inch hole unless there is a half-inch hole just above it, to let in light. The Martin's body in the small entrance makes the compartment dark, and the bird seems afraid to enter. After the half-inch windows were bored, they entered freely. I expected the Kingbirds close by to make trouble for the Martins, but was happily disappointed.

Next spring, we will have another and larger Martin house, and keep the dust-shot pistol handy for Sparrow invaders. It makes little noise, does not seem to frighten Wrens, Bluebirds, or Swallows, and the Martins pay no attention to it. The shotgun makes too much noise and alarms all birds. I know of nothing that will banish Sparrows as effectively as the shot-pistol.

Get rid of the home-cat! One bottle of Pasteur Rat Virus every four months will clear out rats and mice better than a dozen cats. We have demonstrated that to the satisfaction of the neighbors, which is more than was expected.—CHARLES H. TOWNSEND, *Greens Farms, Conn.*

Food for the Birds

Here is an example of what can be accomplished by throwing out food to the birds.

In the storm of April 16, 1914, when it snowed in central New Hampshire to the depth of four inches, we swept a spot of ground about twelve feet square, every little while, and strewed cracked corn, or

what is known at the store as chicken-feed. This had been a feeding-station for some time, but heretofore only Jays, a few Song Sparrows, or a Junco or two, had patronized it.

On the day of the storm, the average number of birds seen at a time was 40. As night approached, we counted 125 feeding together. Of the species, the Junco predominated and in order according to numbers: Song-Sparrow 12, Blue-Jay 5, Tree Sparrow 3, Fox Sparrow 3, Vesper Sparrow 2, Pine Siskins 2. On the surrounding trees and bushes, attracted by the other birds, we saw Robins, a flock of Grackles, Red-polls, and one Phoebe, making eleven species in all.—MARY GIBBS HINDS, *Grafton, N. H.*

A Syracuse Feeding-Station

My home is only fifteen minutes' walk from the center of a busy city. There are three lines of cars passing the house, but we have large yards at the rear. Last winter, I fastened pieces of suet to one of the trees and the grape-arbor in the yard. I called them my bird restaurants—At The Sign of the Suet. I had five patrons—not counting English Sparrows—two pairs of Downies, and at least one Nuthatch. This year, I have greatly increased the scope of the restaurant privilege, and have crocheted six bags with large meshes, in which the suet can be much better protected from the elements. The bags decorate the various trees in the yard and the grape-arbor. This morning, January 14, I counted ten patrons—the same two pairs of Downies, undoubtedly, which came last year, also the Nuthatch. In addition to these are a Hairy Woodpecker and four Chickadees. I had read in BIRD-LORE how Chickadees might be induced to eat out of one's hand; but I confess I was somewhat skeptical. However, I thought I should try. For several days I was unsuccessful, but one morning a Chickadee actually flew on my hand and pecked at some suet. I held my breath from sheer delight. Every day since then I go out, and two of the four Chickadees

come with perfect fearlessness. This morning, all four of them were much in evidence. They fairly fought each other to get the suet from my hand. As fast as one flew away, another would come. They even perched on the top of my head, shoulder, and arm, to wait their chance. I have tried walnut meats ground up fine, also peanuts in small pieces. The walnuts they toss to the ground in scorn; the peanuts meet with more favor, but they prefer the suet to either. They will take a few dainty nibbles then brace themselves with their claws and detach a much larger piece from the suet chunk. This they fly away with, and wedge in between some twig and branch, or even in the wire-fencing—for future need, I suppose.

One morning when I went out, I saw a Downy feeding from one bag, a Nuthatch from another, a Chickadee from a third, and, I regret to say, an English Sparrow from a fourth bag. The Sparrows are the most numerous patrons. During the year just passed, I have seen forty different varieties of birds in my own yard.—B. H. COLMAN, *Syracuse, N. Y.*

Fall Migration at Cobourg, Ontario

While in Cobourg, Ontario, on September 4, 1913, it was noticed that many birds were migrating. An incomplete list of all the birds seen showed the following species:

Pied-billed Grebe, Herring Gull, Yellow-legs, Spotted Sandpiper, Killdeer, Mourning Dove, Sharp-shinned Hawk, Sparrow Hawk, Kingfisher, Downy Woodpecker, Flicker, Hummingbird, Kingbird, Crested Flycatcher, Phoebe, Least Flycatcher, Blue Jay, Crow, Goldfinch, Vesper Sparrow, Savannah Sparrow, White-throated Sparrow, Field Sparrow, Slate-colored Junco, Song Sparrow, Rose-breasted Grosbeak, Scarlet Tanager, Barn Swallow, Red-eyed Vireo, Black-and-white Warbler, Nashville Warbler, Northern Parula Warbler, Black-throated Blue Warbler, Myrtle Warbler, Magnolia Warbler, Bay-breasted Warbler, Black-throated Green Warbler, Ovenbird, Water-Thrush, Redstart, Cat-

bird, Brown Thrasher, Winter Wren, Long-billed Marsh Wren, White-breasted Nuthatch, Red-breasted Nuthatch, Chickadee, Ruby-crown Kinglet, Wood Thrush, Olive-black Thrush and Bluebird.

The large numbers of Flycatchers and Warblers were particularly noticeable.

On the night of September 5, the migrating birds left; for, on the sixth, it was hard to find a Warbler or Flycatcher, and very few birds of any kind were in sight.

Cobourg is on the north shore of Lake Ontario, and the question presents itself whether the migrating birds regularly bank up on the lake shore, and leave at one time, thus sending a cloud of birds over into the states.—JOHN P. YOUNG, *Youngstown, Ohio*.

Nesting-habits of the Pied-billed Grebe

I may be able to add a few further facts to those given by Arthur A. Allen, in the July-August number of BIRD-LORE, on the nesting-habits of the Pied-billed Grebe. Finding a pair of these birds in a lily-pond in Mill Creek Park at Youngstown, Ohio, in June, I procured a boat and with a friend searched for a nest, with success. It was found anchored to and concealed by cat-tails near the center of the pond, which covered about three acres. The nest was composed principally of leaves and stems of dead cat-tails, and contained six eggs. The mother bird was not on the nest and the eggs were covered; the platform upon which they rested was floating upon the water and very moist. Later, reliable observers reported to me that they saw the male birds feeding the female while on the nest. I walked to the pond usually every day during incubation. The male at first would come to meet me, and would stop from fifteen to twenty feet from me, if I stood at the shore. (I observed that he would not do this with strangers.) Then, if I walked along the shore, he swam along near the shore, keeping between me and the nest. If I turned to leave the pond, he usually indulged in gyrations with his wings, cutting circles on the surface of the water, and diving.

One day, I found the female dead on the edge of the pond, and the male still on guard. I saw him there for two days, when he disappeared. About two weeks after the disappearance of the male, I heard a faint call in the cat-tails, like a Grebe, and upon investigation found the male still on the pond, and that he was accompanied by six little Pied-billed Grebes, apparently just off the nest.

The valiant little fellow remained with his charge in the lily-pond, to the delight of many visitors, until the fall-migration period, when all disappeared.—VOLNEY ROGERS.

Gulls Preparing a Meal

Where I am staying among the islands in the Great South Bay, watching the birds is a pastime that never tires, and occasionally develops something new. Last February and March, when for weeks the ice-covered waters caused much suffering among the water-fowl, especially those kinds which are not divers, and were thereby debarred from deep-water feeding, various expedients were restored to in acquiring a meal.

It was amusing to watch the Herring Gulls obtain the flesh of mussels that lived along the bank. They would take one and fly up about a hundred feet or more in the air, and then let it drop down upon the ice. Sudden contact with the hard surface after such a fall would crack the shell apart, and their feast was ready.

Sometimes dozens of them might be observed rising up, holding themselves suspended a moment at a certain elevation, dropping their mussels, then swooping down after them. As it often took several ascents to accomplish their purpose, their evolutions of rising and falling made a beautiful and animated sight.—JOHN TOOKER, *Babylon, Long Island, N. Y.*

Herring Gulls in Connecticut

In 'The Birds of Connecticut,' by Messrs Bishop and Sage, the Herring Gull (*Larus argentatus*) is called "an abundant winter

visitor," with the earliest record from New Haven, August 14, 1883, and the latest from New Haven, May 24, 1900. The authors of the book say: "That the list is unsatisfactory and incomplete in many ways the authors realize all too well, and they hope that it will be a stimulus to others to fill up the gaps by conscientious collecting."

I wish to fill in one of the "gaps," not by "collecting," but by careful observation, backed by many witnesses, and a photograph taken in mid-July.

My work takes me up and down the sound along some fifty miles of shore and, throughout June, 1914, I saw Gulls in varying numbers between Norwalk and Greenwich. The largest number stayed about Goose Island bar, in the Norwalk Islands; and Smith's Ledge, near Stamford, was also a favorite place. On an average, two-thirds of the birds seen were in immature plumage; the rest fine adults, and not one showed signs of injury.

Throughout July, the Gulls were to be found at low water on the bars and reefs, and a man living so as to overlook Goose Island bar tells me that "There was seldom a day when there were not between forty and one hundred Gulls seen."

July 18 and 19, 1914, I counted sixty-four Gulls at one time, and the next day there were twenty-eight in the same place. They were also seen in varying numbers on the 22d, 23d, and 28th; and, on the 31st, I counted forty on Goose Island bar.

Knight, in 'The Birds of Maine,' says that "westward of their breeding range it [the Herring Gull] occurs as a non-breeding summer coast bird to beyond our border."

It is evident, then, that the Herring Gull is a summer bird at this end of the state, and has occurred this summer in larger numbers than formerly, and seems akin to the "non-breeding" birds of Maine, for, as the author of that work says: "Breeding birds have other things to do than to sit on a sand-bar and sleep and preen their feathers."—WILBUR F. SMITH, *South Norwalk, Conn.*

A Winter Pensioner

The Downy Woodpecker in the picture has been a winter pensioner; I fully believe the same one for about ten years. This last winter, a dead chestnut tree, with limbs cut within two or three feet from the trunk, was placed on the ground, and suet fastened to the limbs in several places. This spring, on account of repairs to the porch, it was greatly in the way, and, being the last of March, and the weather mild, it was decided to take it up. After this was done, it was cut in two about five feet from the top, the bottom to be uti-



DOWNY WOODPECKER AT SUET

lized as a post; but when Mrs. Downy came and found the tree which she and her mate had fed in every day all winter had gone, her anxiety was very pronounced. She viewed the wreck, as it lay on the ground, from every available perch, with loud exclamations, and directed them particularly at my brother who was working on the piazza roof, coming not more than ten feet away on the eaves of the house just above his head. Finally, the top section, which had a piece of suet fastened where they had pecked out the inside, making what remained look like a nest or basket, was placed on the hitching post, as in the picture, and Mrs. Downy

came down and was quite satisfied. She even took no exceptions whatever at having a black camera only three feet from her head, not even turning when the shutter clicked. The strong confidence shown, I dare say, is born of long acquaintance, and is most gratifying to us.—MARGARET S. HITCHCOCK, *New Vernon, N. J.*

The Fare of a Sandhill Crane

While 'Jack,' my Sandhill Crane, and I were out in the grove this morning, he ate 148 grasshoppers, 2 moths, 1 roach, 1 'swift' (a species of lizard), 2 grubs thicker than a lead-pencil, about two and one-half inches long, and 11 spiders.

After we returned to the house, he added 17 'grapenut' pellets, the size of common marbles. Breakfast was finished about 9 o'clock. Between that time and three o'clock, he had 'scratch-feed,' cracked corn, Kafir corn, and wheat. At three o'clock he had a good-sized piece of porterhouse steak cut into small pieces, and would have eaten more insects, but the rain drove us home.—MRS. L. H. TOUS-SAINT, *Rio, St. Lucie Co., Florida.*

An Abnormally Colored Scarlet Tanager

In all bird-lovers, the sight of a Scarlet Tanager makes the pulse quicken! So, when one day in late May I discovered a female Tanager building her nest in a hickory tree within a few yards of my house, I considered myself peculiarly blessed by nature, and was prepared to take full advantage of the good fortune.

Lack of leisure at first curtailed observation, and a week passed before I saw the male; although I frequently heard a Tanager song and the typical *chip-churr* call of the species. My surprise, therefore, was intense to see the female returning one morning accompanied to the nest by a bird in brilliant orange plumage of a Baltimore Oriole. Careful watching soon convinced me that he was entirely at home, and undoubtedly the father of the establishment. I fear, a few years ago, I would

ruthlessly have slain the two birds, excusing my conscience on the weak plea of adding something to science. It was soon quite evident that my Tanager was undoubtedly a true Tanager, masquerading in strange plumage. A close and very careful investigation showed him to have the typical black wings and tail of all male Scarlet Tanagers, while his body and head were brilliant orange, paling to yellow on the belly, very similar but slightly darker than the coloring of the Baltimore Oriole.

At present writing, mother Tanager is faithfully incubating, while the head of the house continues to delight both our eyes and ears.—WILLIAM HENRY TROTTER, *Chestnut Hill, Pa.*

The Chat in Minnesota

For a number of years I have searched the woods diligently during the migration of the Warblers for a sight of the Chat. Finally I came to the conclusion that I lived too far north.

On the evening of October 2, 1912, just at dusk, my attention was called to a loud *chuck*. What attracted me at once was the loud and forceful call—a call that I knew I had never heard before. It came from a large syringa bush not more than four feet from our back porch. The bird seemed to be in great distress and was flying back and forth in the bush, so that at first I could not get a good view; but knew it was larger than any Warbler I had ever seen.

Finally it flew out into view, and I had no difficulty in recognizing it at once as the Chat. I could hardly make it seem true. Several days after, a small boy brought me a paper bag containing a dead bird. To my surprise it was a Chat. It had been killed, but he claimed to have found it in an alley near a large tree. I sent it to a taxidermist to be mounted. He has lived near La Crosse, Wisconsin, for thirty years, and he wrote me that during that time he had never seen a Chat. In "The Warblers of North America" no record is given of the Chats' migration in Minnesota, excepting that few

are left after September 1, north of the 39th parallel. We are near the 44th.—
VICTORIA M. DILL, *Wabasha, Minn.*

Photograph of a Hummingbird on the Wing

On June 5, 1914, I photographed a Hummingbird on her nest with a Graflex camera, by standing on a step-ladder. The incubation period was about at an end, and the mother bird persistently returned to the nest. The photograph of the bird sitting still was readily obtained. I then arranged a mirror to reflect an excess of direct sunlight upon the nest, set the shutter at its fastest speed, and snapped the bird about twenty times as she flitted to and fro behind the nest. I tried to photograph her while she was at a distance from the nest, but, by the time the shutter would snap, she would be behind the nest. If I had tried to snap her while she was behind the nest, I should probably have obtained a photograph of her a foot or so away from the nest. I obtained five pictures, showing the wings clearly and distinctly.

The bird on the wing appears to be alighting on the nest, for the camera was pointed upward at an angle of about 30

degrees. She is really behind the nest, and flying upward with great speed.

The photograph was taken with an eight-inch Zeiss protar lens, at its full



HUMMINGBIRD APPROACHING NEST

opening, in about one fifteen-hundredth of a second.—FRANK OVERTOW, *Patchogue, N. Y.*

The Building of a Robin's Nest

I read with much interest the article in the September-October, 1913, issue of *BIRD-LORE* on "The Building of a Robin's Nest" and bethought me of my own observations at Port Sanilac Michigan, April 28, 1907.

To quote from my notes, "I have just been watching a lady Robin building her nest over the front door. I stood on a step-ladder next to the door, on the inside of the house, with my face at the frosted-pattern glass not ten inches from the bird. Last year's foundation was in place, but she has replastered it and is now carrying soft, dead, lawn grass. She alights on the edge of the nest with a mouthful, drops it in, hops on top of it, and squats down with the ends sticking up all around her. At once she lowers her tail over the nest's edge for a support, braces her wings against the inside of the nest, and throws her weight onto her breast. Then she begins a perfect tattoo with her feet against the sides and the bottom. After ten to fourteen kicks, she rests a moment, turns a little, tucks down a few grasses with her bill, and repeats the performance.



RUBY-THROATED HUMMINGBIRD ON NEST

She keeps this up until all the grass ends are tucked in. This operation shapes the nest and presses the grass into the soft mud, which I was not fortunate enough to see her do. At no time was she conscious of being watched.

I am writing these notes at my desk in the library, about seventy feet away from the nest, and can hear the patter of her feet every time she kicks.

Later! She worked an hour after I discovered her, about noon, and then began feeding. I did not have a chance to observe her again.—MISS HARRIET W. THOMSON, *Women's Gymnasium, University of Oregon, Eugene, Oregon.*

A Robin Accident

The story of the accident to the Chipping Sparrow, told by Pendleton Marshall in the July–August BIRD-LORE, reminds me of a similar accident to a Robin.

On May 6, 1914, a girl came running to me, saying that she wanted a ladder, as a Robin was hung in one of their maples. We took a long ladder and went to the tree, where we found several women and children watching the Robin as it fluttered head downward, hung by a long string that was twisted about the branch and the bird's leg and wing. A boy speedily climbed up and brought it down. We found the leg broken off half way of its length, just holding by the skin, which was stripped from the bone.

We thought it useless to try to mend the leg, so we cut the string of skin. We put the bird in a cage, but after resting some hours, it fought desperately to get out, and it would not eat, so we released it. It flew strongly across the yard to the fence. For some time the Robin was seen to have difficulty in perching, especially if there was a wind; but it learned to balance, and was able to find food. It seemed not long before it wholly recovered from the shock, and was as well as any bird. The neighborhood children saw it in different places, and it was often in our yard, hopping about on its one foot, or using the bath. Sometimes it scratched its head with the stump of

the leg, but seemed not to use it otherwise.

I do not recall seeing this bird since July 30, when it was bathing in our bird-bath, with an English Sparrow. We think, but are not sure, that it had a nest of young in July.—ELIZA F. MILLER, *Bethel, Vermont.*

Notes from Seattle, Washington

In the May–June number of BIRD-LORE, in "Notes from Field and Study," I was greatly interested in the "Curious Actions of a Robin." Our country home is on Lake Washington, and last year we had a Robin experience identical with that related by Mr. Wood. We had re-papered the house, painted and cleaned windows, after the months spent in the city. It was in April that the Robin, for four or five days, seemed bent on self-destruction at a corner bay window on a covered porch. We tried leaving windows and doors open, but to no effect. The only solution to this puzzling problem was the fact that the wall-paper was of a robin's-egg blue! I decided it must be a case of color attraction, but a few days later my decision was weakened by a neighbor having a like experience, who was finally obliged to barricade the windows. It would be interesting to know the meaning of such queer actions.

I should also like to say, in reference to the picture of a "Summer Visitor," in May–June BIRD-LORE, that for four years we had an Oregon Towhee as one of our family, each year bringing his brood to be fed, but never allowing his families to take the privileges of house and porch, that he seemed to feel belonged to himself alone. He knew my call, as I knew his, and would come to me in the house or in the woods, regardless of how many people were about us, feeding from my hand, or perching on my shoulder, and taking bread from my teeth.

Last year he seemed to have an infection of the eye, and this year did not come to us.—KATHRINE M. MANNY, *Seattle, Wash.*

Lake Mohonk to be a Bird Preserve

Lake Mohonk lies a few miles west of the Hudson River, a little north of the latitude of Poughkeepsie. It is twelve hundred feet above sea-level, and is held up, like a giant dewdrop, by one of the peaks of the Shawangunk range of mountains, almost at its very crest. Here, standing on one of the crags which rise precipitously from the shore-line of the lake, one may look across the Wallkill Valley to old Storm King, at whose foot nestles the quiet little town of Cornwall-on-the-Hudson, and, farther to the northward, the Berkshires in Connecticut and Massachusetts. To the westward the gaze travels over the Rondout Valley, and rests, at the horizon, on Slide Mountain, Plateau Mountain, and other well-known peaks of the Catskills.

It was here, immediately at the western edge of the lake, that the late Mr. Albert K. Smiley built, in 1869, the Lake Mohonk Mountain House, which has since become so famous a resort, and which is noted particularly as the scene of several important yearly conferences, notably the gathering in the interest of international arbitration, which, every May, holds a three-day session at this delightful spot. More than fifty miles of driveway have been constructed to bring all the most interesting points of the estate within easy access, rustic covered seats have been placed wherever attractive views are to be found, and a garden of twenty-five acres stretches eastward to a wall of precipitous rock a quarter of a mile from the hotel. Immediately surrounding the hotel, besides the garden, are an athletic field, open groves, tennis-courts, cottages, stables, and the other usual appurtenances of a summer hotel.

Bird life is about normal at Mohonk. In the garden are numerous Robins, Goldfinches, Chipping and Song Sparrows, and Hummingbirds; in the open groves nearby are Wood Thrushes and Towhees; along the craggy shores of the lake are Phœbes, Blue-headed Vireos, and an occasional Winter Wren; Nuthatches, Chickadees,

Scarlet Tanagers, Wood Pewees, Red-eyed Vireos, Woodpeckers, and Warblers of various kinds may be seen or heard in the woods; and Juncos, Indigo Buntings, and Hermit Thrushes nest along the sides of the cliffs. In the valley below Bobolinks, Meadowlarks, and Barn Swallows may be observed, and even Yellow-breasted Chats. There are many other species of birds inhabiting Lake Mohonk and its immediate environs, but these are the most conspicuous.

But it can support many more. With its expanse of water, its rocky cliffs, its wooded streams, its variety of woods, its large garden, and its numerous buildings, and with its facilities for protection, Mohonk could be made a veritable bird paradise. With this end in view, measures have been undertaken to attract birds to the place. Permission has been secured of the present proprietor, Mr. Daniel Smiley, brother of Mr. Albert K. Smiley, to conduct such an enterprise, funds have been supplied by interested bird-lovers, and the work has been begun. Fifty nesting-boxes of the Berlepsch pattern have already been placed in suitable localities, and a hundred more have been ordered.

This is the modest beginning of what, it is hoped, may be the establishment of an unusually fine bird preserve. As the estate embraces the whole mountain and extends for several miles in every direction from the hotel, it can be readily understood that the possibilities it offers are very great. I may add that, as full charge of the work is in my hands, I will gladly welcome any suggestions that may tend toward making the Lake Mohonk bird preserve a notable example of what can be accomplished in the way of increasing birds on large estates.—HENRY OLDYS, *Washington, D. C.*

A Successful Campaign Against Grackles and Starlings in Hartford, Connecticut

For more than twenty-five years, the residents of a certain section of Washington Street in Hartford have suffered great annoyance by reason of a large flock of

Grackles, which have been accustomed to gather during the summer in large trees on the lawns and bordering the highway.

Washington Street is perhaps the finest residential street in the city, running along the top of a ridge well above the Connecticut River. It is bordered by solid rows of beautiful elms and maples, interspersed here and there with trees of other varieties, notably horse-chestnuts. These trees form an arch extending in many places entirely across the wide street. The elms probably average eighty feet in height, the maples somewhat less, and the horse-chestnuts from fifty to sixty feet. In these trees, particularly the horse-chestnuts and maples, in the block between Ward and Park Streets, a distance of six hundred feet, the birds have gathered for the night, coming in small flocks from all directions, but principally from the meadows bordering the river, a mile or two away.

Within the last three or four years, the flock has been greatly augmented by the addition of large numbers of Starlings. This year, the Starlings seem to be in the majority. The birds, numbering probably several thousand, began to come in just before dark, and by seven o'clock all had arrived, and from this time until about six in the morning constituted a first-class nuisance, whistling and chattering until about 8 P.M., and beginning about 4 A.M., making a tremendous racket so that it was difficult to sleep. Not less annoying was the filthy condition of the walks and lawns, and the damage to the clothing of those passing along the street was not inconsiderable.

On several occasions during the last ten or fifteen years, attempts have been made to get rid of them. 'Scarecrows' have been erected in the trees. Rockets were used at one time and small roman candles at another time. Once, the experiment was tried of fastening a pulley high up in a tree and drawing up a pail containing a pack of fire crackers which were set off with a fuse. None of these plans was successful.

The annoyance became so great this

year that early in August one of the residents brought the matter to the attention of the City Board of Health. This board, having some doubt as to its jurisdiction in the matter, suggested that application be made to the police department for permission to shoot the birds, there being a city ordinance against the use of firearms within the city limits. The trouble with this suggestion was, that anyone attempting to carry it out would encounter the Connecticut statute prohibiting the killing of any wild bird other than a game-bird.

At this juncture, the Board of Health applied to the President of the Hartford Bird Study Club for advice, receiving the suggestion that an attempt be made to disperse the birds by the use of roman candles. In the meantime, the person making the complaint had applied directly to the mayor of the city for relief. The mayor thought that the matter might come under the duties of the Park Department and so turned it over to the Superintendent of Parks, whose name very appropriately is Parker. Mr. Parker thought it would more properly be a subject for the consideration of the Street Department, and, after consultation with them, the decision was finally reached to turn the job over to the City Forester.

In the meantime, the Bird Study Club had offered to make an effort to drive the birds away. Their offer was very gladly accepted and a plan suggested by them was carried out. Twelve men provided with roman candles were stationed at intervals along the street, six on each side. At a pre-arranged signal, each man was to light a candle and discharge it into the adjacent trees. The first night, an experiment showed that candles of a very much higher power must be used. A supply of such candles was telegraphed for and the following evening the plan outlined above was carried out. The candles used were ten-ball, weighing 56 lbs. to the gross. The first volley, fired just as the birds were well quieted down, drove the entire flock out immediately. They soon began to return in detachments and within

15 minutes most of them were back at the old stand. A second volley was then poured into them resulting in a very noticeable diminution of the returning birds. This second volley was fired just before the street lights were turned on, at 7.45.

The next evening the same tactics were used and in addition to the firing of the big candles from the ground, the Forester placed three of his climbers high up in the worst trees where they used some of the weaker candles. This second night the birds were scattered over an area more than twice that originally occupied. The first volley was fired a little earlier, about 7.15, while the birds were still fluttering about from tree to tree. The second volley was fired ten or fifteen minutes later.

An investigation the next morning showed that the birds had been still more widely scattered, covering about 1,500 feet on Washington Street and 300 feet on Ward Street. The third and last evening, 15 men were used, placed about 100 feet

apart in the middle of the street. The first volley cleared out the whole flock and only a few scattering birds returned, so that only a few candles were needed in the second volley.

As a net final result, about eight dozen candles were used at a total expense of about \$10 and, at the end of a week, only a couple of dozen birds are to be found where there were thousands. Some idea of the number of the birds, and the annoyance caused, may be gathered from the fact that people living near one of the worst spots on the street were unable to keep their windows open on account of the filthy condition of the lawn and trees. On another lawn, the grass for several years, soon after the coming of the birds, looked as if a fire had passed over it. One resident says that for the first time in years he had been saved the trouble of hiring a man to wash off the walks in the morning.—LEWIS W. RIPLEY, *Hartford, Conn.*



A 'Call-note'



The 'Call-note' Paid

CHIPPING SPARROW AND COWBIRD

Photographed by Arthur A. Allen

Book News and Reviews

BIRDS OF NEW YORK. By ELON HOWARD EATON. New York State Museum, Memoir 12, Part II. Introductory Chapters: Birds of Prey to Thrushes. Albany, University of the State of New York, 1914. 4to text, pages 1-543; plates. 43-106.

With the appearance of the second and concluding volume of Mr. Eaton's monograph, the state of New York may justly claim to have produced the best and most elaborate memoir of its kind which has thus far been published. In a word, this volume is a worthy successor of the one which preceded it (see a review in *BIRD-LORE*, 1910, p. 118). Higher praise than that cannot be asked.

The biographical section begins with the Birds of Prey, on page 61, and, following the order of the American Ornithologists' Union's 'Check-List,' ends with the Thrushes, on page 541. The method of treatments conforms with that of Volume I and includes some synonyms, the derivations of the scientific name, descriptions of plumage, and detailed consideration of 'Distribution' and 'Haunts and Habits.' This authoritative matter is prefaced by a thoughtful and suggestive section on 'Bird Ecology,' which has a practical bearing on current questions of bird conservation. The causes governing the comparative numbers of birds under natural conditions, and the factors which tend toward their increase or decrease, are here presented at some length. The opinions advanced are the mature views of a trained biologist, as well as experienced bird student, and this introduction of some 50 pages forms an original and valuable contribution to a subject which, as our population grows, will become increasingly important.

The 64 plates, figuring all the species of regular occurrence in the groups treated, are wholly admirable bird portraits by an artist whose sympathy with his subject is equaled only by his rare ability to

give form to his impressions. It is most gratifying to know that the originals of the 106 plates which form Mr. Fuetes' share of this great work have been purchased by Mrs. Russell Sage, and presented by her to the State of New York.—F. M. C.

DIE TIERWELT DER SCHWEIZ IN DER GEGENWART UND IN DER VERGANGENHEIT. Von DR. EMIL AUGUST GÖLDI, Professor der Zoölogie an der Universität Bern. Band I: Wirbeltiere. Mit 2 Karten und 5 farbigen Tafeln. Bern-Verlag von A. Francke-1914. Pages, 654-XVI.

This first volume of 'The Animal World of Switzerland' deals with the Vertebrates. The first part (171 pp.) treats of the fossil fauna, and has long tables showing the different periods of the earth's history and the forms of life occurring in each, with especial reference to Switzerland. In the second part, the Swiss mammals, birds, reptiles, batrachians and fishes are taken up in turn, with a final chapter on the hunting and fishing.

There are a few rather statistical pages on the number and composition of the Swiss avifauna, which consists of about 360 forms (out of the 660 known from Europe), of which 75 are permanent residents, 107 summer residents, 70 transients, 36 winter visitors, 18 summer visitors, and 55 irregular. A tabular list (following, unfortunately, the archaic Raptores-Natatores classification) shows at a glance to which of these groups any species belongs, and gives the German names, British Museum Catalogue and Sharpe's 'Handlist' names, and synonymy in the works of Fatio and Studer. Nearly a hundred pages are then devoted to a cursorial treatment of the Swiss birds, still following this classification. The bird chapter ends with a twenty-page article on the migration in Switzerland, with a map showing the major and minor routes.

The book is intended for the general reader in natural history, not for the amateur who wishes to identify and learn about the birds he sees on a trip to Switzerland.—C. H. R.

The Ornithological Magazines

THE CONDOR.—The July number of 'The Condor' is essentially an oölogical number, as two of the three main articles are devoted to the subject of eggs. In one, Dr. T. W. Richards, U. S. N., presents 'A Plea for Comparative Oölogy,' and in the other, Dr. R. W. Shufeldt, U. S. A., writes 'On the Oology of the North American Pygopodes.' Dr. Richards calls attention to the tendency to form 'faunal' rather than 'group' collections of eggs, and shows that more valuable information can be acquired from a study of the eggs of a certain group of birds than from the eggs of those which breed in a certain area. But the main weakness of oölogy is touched on only incidentally, namely, that, although it is the means by which many students become interested in birds, its chief result seems to be acquisition rather than serious study. Oölogists are apt to be more concerned with making collections than with carefully studying their specimens. Most collectors of eggs, at least in this country, have unfortunately published little, and aside from notes on color, size, and number of eggs in a set, the larger private collections have thus far yielded only a meager contribution to our knowledge of the life histories of birds. Dr. Shufeldt describes the eggs of the North American Grebes and Loons from specimens in the U. S. National Museum and the E. J. Court collections. Excellent figures are given of selected eggs of the Western, Holboell, Mexican, Eared, and Pied-billed Grebes, and of the Common, Black-throated, and Red-throated Loons.

In a brief but interesting illustrated article, Willett gives an account of the 'Peculiar Death of a California Bush-Tit' which became entangled in the wool used in the construction of its nest. This nest

was found March 28, 1914, near Live Oak, Sutter Co., Calif.

Among the shorter articles, A. B. Howell makes 'A Plea for More Lasting Field Notes,' and urges that provision should be made by field collectors to turn over their notes (after they are through with them) to some central agency, such as the Cooper Ornithological Club, where they will be preserved and utilized. If this suggestion could be carried out, the club would soon have a unique collection of manuscripts, and would be able to preserve much valuable material, now lost. How much could be added to our knowledge of certain phases of bird-life in the last century if the notebooks of some of the older ornithologists were now available! How much light could be thrown on Pacific-coast ornithology if the field-notes of Bryant, Cooper, Gambel, Grayson, Suckley, and others, were preserved and accessible. But who knows whether any of these notes are still extant or where they are?—T. S. P.

THE ORIOLE.—The first number of the second volume of 'The Oriole' (June, 1914) organ of the Somerset Hills Bird Club (Bernardsville, N. J.), opens with an article, by William S. Post, on the opportunities for bird students afforded by the region about Bernardsville. They are obviously so promising that we hope the members of the Somerset Hills Bird Club will take advantage of them. Meredith H. Pyne, however, in 'The Destruction of Bird Life in Bernardsville,' tells us that "savage cats," "tree-climbing children," and the encroachments of civilization, have left "very few" of the birds which ten years ago abounded there.

Evidently not sharing Burroughs' estimate of alliteration, Lilian Gillette Cook writes of meeting some of the common European birds in their haunts, under the title 'A Few Friendly Foreigners in Feathers.'

The Editor, John Dryden Kuser, presents a series of thoughtful replies to the question 'Why Study Birds?' and in a second article, William S. Post makes an

important contribution to our knowledge of the nesting habits of the Merganser (*Merganser americanus*). On June 18, 1910, and on June 12, 1913, on the Tobique River, N. B., Mr. Post saw most of the individuals of broods of eleven and seven, respectively, downy Mergansers jump from their nest in the limb of a live elm, about forty feet from the ground. The tree stood some fifteen feet from the bank of the river. Several of the young were seen to fall on the ground, and Mr. Post believes that none fell into the water. On landing, they immediately went to the water, where their mother was waiting for them.

Under the title 'Intensive Field Observation,' C. William Beebe gives an outline for the study of birds in nature, based largely on one prepared for BIRD-LORE by Ernest Thompson Seton some ten years ago (Vol. VI, 1904, p. 182).

Beecher S. Bowditch, Secretary of the New Jersey Audubon Society, writes of the work of that society which, it appears, now has a membership of more than twenty thousand. In an editorial on bird destruction, the Editor would grant the scientist permission to collect specimens and the sportsman permission to kill game birds, provided such collecting or killing did not result in decreasing the numbers of the species concerned. In this country, at any rate, the taking of specimens for scientific purposes is now so controlled by law that the result of scientific collecting is wholly negligible. Indeed, in our opinion, it has never been otherwise. It is now very difficult for a student to secure a permit to collect even a limited number of specimens for scientific purposes. Some states refuse entirely to honor applications for permits to collect specimens, but will give to the same applicant a license to shoot birds for sport.

Other states limit the number of scientific permits to six or eight, and in a single year issue over one hundred thousand permits to kill for pleasure! Evidently there is room in the treatment of this subject for a little of the reasonableness the Editor of 'The Oriole' advocates.

THE August number of 'The Oriole,' forming the second and concluding issue of Volume II, opens with a short article on the nesting of the Blue-winged Warbler at Little Falls, N. J., by Louis S. Kohler; who also describes the experiences of an ornithologist on 'a June Day at Greenwood Lake'; Lee S. Crandall writes of 'Some Costa Rican Orioles'; T. Gilbert Pearson tells of the successful efforts of the National Association of Audubon Societies in protecting plume-bearing Herons; George D. Cross gives 'Some Hints for Better Game Protection'; Helen Bull, Sally Sage, and Cornelia Sage contribute brief notes on 'The Orioles,' 'The Swallows,' and 'The Cowbird' respectively, while the Editor discusses terms which will definitely describe the manner of occurrence and relative abundance of a given species in a certain area.

Book News

THE University of Iowa issues a booklet of ten plates illustrating its cyclorama of Laysan Island bird-life, doubtless the most elaborate museum exhibition of its kind in the world. The cyclorama was composed and executed by Prof. Homer R. Dill, of the University of Iowa, and the background, which is 138 feet long and 12 feet high, was painted from studies made in Laysan by Charles A. Corwin, distinguished for his success in painting backgrounds for the bird and mammal groups of the Field Museum.

'OUR FEATHER MONITORS,' a booklet of poems by J. H. A. B. Williams, of Glenmont, Ohio, is published with the object of 'stimulating an interest in bird-life,' and end it seems well-designed to accomplish.

THE Royal Society for the Protection of Birds issues in attractive leaflet form an account of its Bird Reserve 'Brean Dawn,' which describes a locality apparently well designed to promote the ends in view. This publication, which is sold by the Society of 23 Queen Anne's Gate, London, S. W., for two cents, suggests the desirability of issuing similar pamphlets in connection with Bird Reserves in this country.

Bird-Lore

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Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WHEN we published, in the last issue of BIRD-LORE, Mr. Leo E. Miller's surprising figures concerning the destruction of the Rhea in temperate South America, we were under the impression that, owing to the closing of the American market to the feathers of wild birds, this interesting species would be spared the annihilation, with which, in the light of Mr. Miller's figures, it appeared to be threatened.

It will be recalled that Mr. Miller saw bales containing sixty tons of feathers taken from killed Rheas stored in the wareroom of but one firm in Buenos Aires, while an official trade bulletin showed that during the first six months of the year 1913, 34,206 kilos (about 34 tons) of Rhea plumes were exported from Buenos Aires alone. Doubtless additional shipments were made from other southern South American ports.

It seems that these feathers are sold almost wholly in the United States, where they are manufactured into feather dusters! The sixty tons of which Mr. Miller writes had accumulated in the hands of but one importer because of the prohibition at that time (November, 1913) of the importation of Rhea feathers, as well as the feathers of other wild birds into the United States. Knowing this, we felt there was especial cause for congratulation that a law of the United States should extend its protection to this bird of a foreign land.

Now, however, we learn that on Jan-

uary 13, 1914, the Treasury Department of the United States, acting on what it believed to be adequate authority, declared the Rhea to be an Ostrich, and since the Federal law permits the importation into this country of 'Ostrich' plumes those of the Rhea, under the guise of being Ostrich plumes, are also admitted.

The correctness of the decision of the Treasury Department evidently depends upon whether a Rhea, even in the broadest sense, can be properly called an Ostrich. That it has been popularly so called is true; but it is equally true that from the standpoint of actual relationships, it is *not* an Ostrich. Newton believed that the fundamental structural differences between the Ostrich and Rhea were important enough to warrant their being classed in separate orders. No one has ever ventured to place them in the same family.

Obviously then, they cannot rightly share the same common name. To call a Rhea an Ostrich because it is a large, long-legged, flightless bird does not, of course, make it an Ostrich, any more than calling a Goatsucker a Nighthawk makes it a Hawk, or calling an Ovenbird a Golden-crowned Thrush makes it a Thrush.

Popular zoölogical nomenclature abounds in misnomers based on superficial resemblances, but we cannot believe that the government will accept these 'nicknames,' rather than those based on actual relationships, in determining a bird's legal status.

THE growing interest in this country in the establishment of private bird-reserves is one of the most gratifying results of the long-continued effort to arouse in the public an appreciation of the beauty and value of bird-life. The surprising success of Baron von Berlepsch in increasing the bird population of his estate at Seebach, Germany, has supplied an object lesson in wild-bird propagation which has rightly led others to adopt the methods which he has developed. We publish, therefore, with much satisfaction the article by Mr. William P. Wharton, based on his own observations at Seebach.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the editor, at 53 Arlington Avenue, Providence, R. I.

THE VALUE OF A DEFINITE PURPOSE

It is a truism to state that a definite purpose has value, but since very many people overlook or misconstrue value, it may serve a good end to once more emphasize this point in connection with the work of our State Audubon Societies.

That the Audubon Society as a whole has always had a definite purpose, no one can gainsay. This purpose was, and still is, the protection of our native birds, and, in this day and generation, we are reaping the benefits of the cumulative efforts of the pioneers in what is now understood to be a movement in the interests of conservation.

As the work of the Society has become more far-reaching, its purpose has become broader until, today, the word protection does not adequately express all that is meant by the organization.

Along with the idea of protection has grown up the conception of *the value of protection*, and in order to bring this value before the public in definite form, a particular kind of education has been, and still is, necessary.

The importance of having a definite purpose in strengthening measures for the protection of our birds has been shown over and over again in legislation. What we seem to lack most now, is making clear and definite to the public our purpose in education along the line of nature-study. As soon as a definite value is attached to nature-study, its success will be assured. The general uncertainty still surrounding this delightful study in the minds of many people, educators among the rest, lays a special task upon the Audubon Society. The National Association is taking up this task nobly in its Junior Audubon work, but state societies are not keeping pace in this great educational movement.

Again the plea is made, not only for a definite program of work but, also, for some definite piece of work aside from the program, which shall be of value to the entire community.

Perhaps the example of the Audubon Society of Rhode Island may help other states to see their way clear to more practical undertakings.

This society, on a venture, has raised a fund something short of five hundred dollars, with which it is training a field-worker at the Roger Williams Park Museum, for a position which, though not as yet recognized as a legitimate part of the grade-school, is felt as a latent demand in many places.

This field-worker will go out to schools, lecturing, suggesting methods, carrying material for nature-study, and in general, opening up avenues of approach to outdoor life and outdoor observation. The fact that so many teachers are in need of a special adviser is one strong argument in favor of keeping such a worker in the field. One trained worker with a definite purpose can work more effectively than twenty untrained teachers with no particular purpose, or a hazy one.

If each State Audubon Society would raise funds to keep one or more trained workers in the field, nature-study would soon come to its own. Strive to get at definite values in plans for the year's work and values which shall be general rather than restricted in scope. Convince your community and your school-board that nature-study *is an essential*; that to omit it from the curriculum is a backward step; that, to teach it properly, teachers must first be taught themselves. How teachers shall be taught and where they shall be taught is another question. Suggestions from teachers and field-workers or from educators will be welcome.—A. H. W.

SUGGESTIVE LESSONS IN BIRD-STUDY: THE WOODPECKER

WILLIAM GOULD VINAL, Instructor in Nature-Study, The Rhode Island Normal School

The following lessons are suggestive for an introduction to bird-study in the grades. The Flicker is taken as a type, since it is a permanent resident, at least as far north as Massachusetts, and may become an acquaintance before the arrival of other species.

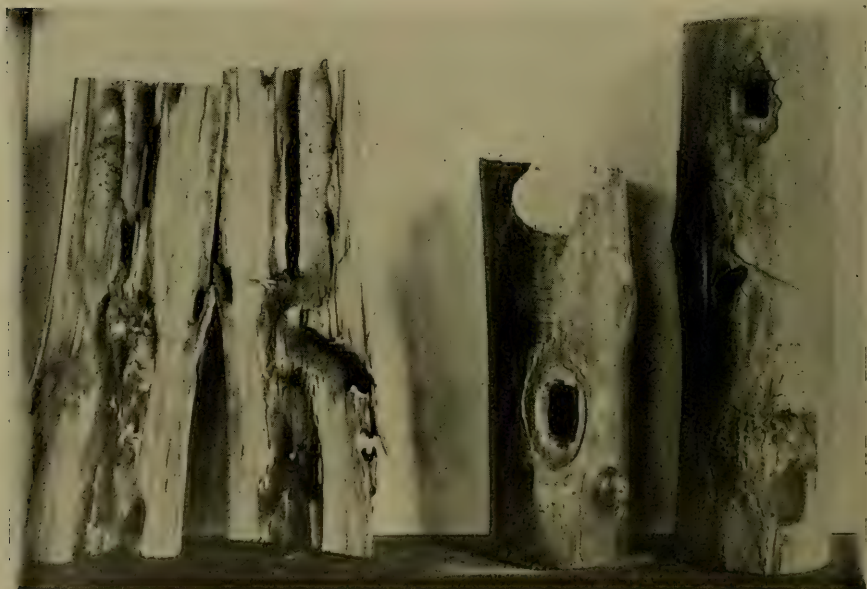


FIG. 1. WORK OF WOOD-BORING GRUBS AND OF THEIR WOODPECKER ENEMIES

Moreover, the Flicker is a good bird to know. This woodland drummer is venturing into cities where it is adapting itself to civilization. One has taken up its abode in a telephone pole, within sight of my home, and its reveille on tin roofs may be heard nearly every morning. It seems as pleased with this new invention as a boy with a new drum. An old barn at home has been a Flicker hotel for years. These facts may be an indication of how other birds might fall into civilized habits if we should meet them half way. If we can develop an appreciative interest in these things in our boys and girls, we will have taken a long step toward gaining this end.

LESSON I. *Field Observations.*—The teacher should become acquainted with a Flicker rendezvous, or retreat, as the species is usually solitary, and take the class to visit the place. The pupils must approach on the alert, "all eyes and ears," for any secrets which the birds may divulge. Suddenly one flies up from the ground. What color did it show when it flew? (White rump.) What was the path of its flight? (A wavy, up-and-down motion. When the wings went down the bird went up, and *vice versa*.) Someone should make a drawing on the ground, to show the manner of flight. If the pupils do not observe these points, they must sharpen their eyes for another trial. What was the Flicker probably doing on the ground? (Feeding.) All birds do not eat the same food. If we would like to know what the Flicker was eating when we disturbed its feast, let us walk to the place where it was feeding and investigate. What do we find that might be eaten by the Flicker? (Weed seeds, bayberries, black alder, poison sumac, and poison ivy berries. An ant's hill might be present, as this is a favorite morsel of the Flicker.) The Flicker eats all of these things that we have found. We might think that it is a good thing for the Flicker to eat the seeds of these poisonous plants, but it has been found that after the waxy substance on the outside of the berry has been digested the seed is thrown out from the mouth. These seeds will germinate and, since the scattering of poisonous plants is not desirable, this cannot be placed on the credit side of our account with Mr. Flicker.

Who saw where our friend went? (To an old apple tree across the field.) Let us visit the home of the Flicker family. On our way we may hear the Flicker call to its mates. If we do, let us try to tell what it says. After interpretations by the class, tell them how other listeners have read the call.

"If-if-if-if-if-if," Burroughs; "Up, up, up, up, up, up, up," Thoreau; "Wick, wick, wick, wick," Mrs. Wright; "Wake-up, wake-up, wake-up, wake-up," Dr. Charles

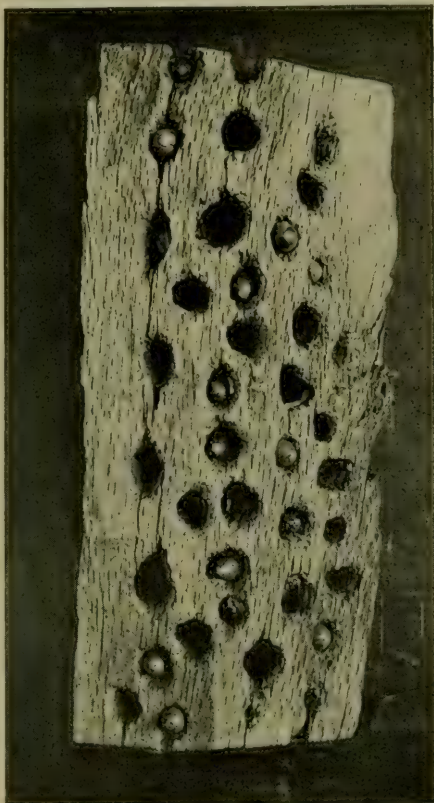


FIG. 2. MATERIAL EXCHANGED WITH DISTANT SCHOOLS. THIS SHOWS THE WORK OF THE CALIFORNIA WOODPECKER IN STORING ACORNS.

Conrad Abbott; "Kee-yer, kee-yer, kee-yer, kee-yer," Chapman; "Yarup! yarup! yarup-up-up-up-up!" Dallas Lore Sharp. Does anyone think that this Woodpecker sings? In which does it excel, instrumental or vocal music? What kind of a musician might we call it? (Drummer.) Investigate and describe its drum. (A hollow dead limb.) Sometimes it telegraphs a wireless message to its mate; at other times it is a sort of an anvil solo, and quite frequently a duller beat in the search for food. Try to learn these sounds in the Flicker's signal code. As we get nearer, let us make an effort to see some of the Flicker's colors. (Black crescent on breast, golden shaft of quill feathers, and spotted underparts.) In what position is the bird resting on the tree? (Perched on a limb or clinging to the trunk.) Remember this is a Woodpecker, and most of its kind cling to trees instead of perching. The class should observe the position of the tail (outer end



FIG. 3. WORK OF SAPSUCKER AND OF DOWNY WOODPECKER. AS FAR AS POSSIBLE MATERIAL SHOULD BE COLLECTED BY PUPILS.

injuriously to the health of the tree.) We have found that Dr. Flicker sometimes eats things which reflect upon his good character, and at other times he eats things which make him very useful.

LESSON II. *Indoor Observation.*—Use stuffed specimens and pictures. The class should collect illustrative material such as that shown in Figure 1. The teacher may exchange material with distant schools. The portion of a tree, for instance, illustrated in Figure 2 came from the Pacific Coast. It shows the work of the California Woodpecker, a red-headed Woodpecker on the western edge of our continent, which drills holes and stores acorns in them for future use.

Review the field-trip, asking about the Flicker's flight, colors, home, call and food. The class is now ready to make close observations, and to study some of the detailed structures which fit the Woodpecker for its life, which has been observed in the field.

braced against the trunk) and, if possible, note character of tail-feathers. (Sharp, pointed ends). Of what use is such a tail? (Acts as a prop.) Since Mr. and Mrs. Flicker have not set up housekeeping, we may look in at the door. In what kind of limb are they building? (Dead limb. Knock on the limb with a stone.) Why? (Because it is easier to dig out the decaying particles of wood.) Fathom the hole, to find how far it extends. (One to three feet.) What is the advantage of so deep a hole? (To escape enemies and better protect inmates from the weather.) Let the class look for places on the tree where a Woodpecker has been drilling. What was it after? (Grubs.) We may call the Flicker a *tree surgeon*. Why? (The tree is the landlord and Dr. Flicker pays rent to his Treeship by removing undesirable insect visitors. These insect lodgers do not pay rent and are

Lead the class to discover the difference between the male and the female. Mr. Flicker has a moustache. Madame Flicker, of course, has not. If all of the colors of the plumage were not seen on the trip, they should be noted now.

Compare the arrangement of the toes with that of the Robin. The Flicker has two toes in front and two behind, the Robin has three in front and one behind. Who remembers something the Woodpecker was doing that it could not have done as well if its toes had been arranged like the Robin's? (Clinging to the side of the tree.) What was the position of its tail when it was clinging to the trunk? (It was bent under against the tree.) Look closely at the tail and tell how it differs from the Robin's tail. (It has sharp-pointed, stiff feathers.) What use does the Flicker make of such a tail? (Helps hold itself on the trunk.) We call this kind of tail a prop. Tell the different ways in which the Woodpecker is fitted to cling to tree trunks. (The toes are arranged like ice-tongs for nipping, and the bird braces itself with its tail.) Why does the Flicker want to cling to the side of the tree? (To excavate for grubs, or to build a home.) What tool does the



FIG. 4. FEMALE FLICKER, RED-HEADED AND HAIRY WOODPECKERS MALE FLICKER

Flicker use for this work? (The bill.) In what way is its bill a good instrument for this work? (Sharp-pointed, stout and hard.)

The teacher may now tell the class the following story, using material such as is shown in Fig. 1 to illustrate the point. Yesterday, we found places in the apple tree where Dr. Woodpecker had performed a surgical operation. (Open the sticks, which have been split.) Inside of this tree were 'worm tracks' such as are seen here. Worms did not make these borings, but young beetles called grubs. They correspond to the caterpillar stage of the butterfly. Dr. Woodpecker came along and saw where Mr. Grub had broken entrance and decided that here was a good meal. Now he did not start to get baby beetle by boring in at the place where the grub entered, as perhaps you and I would do. He held his head close to the trunk and listened. The hard, dry wood is a good telephone, and he heard the grub clicking away as he was digging his tunnel. Dr. Woodpecker, after his diagnosis, determined the nearest way to the worm and began to drill. How could he get the worm out after drilling the hole? He has just the right kind of an instrument for such work, his tongue. He thrust his tongue through the white grub, drew him out and ate him. His tongue is covered with a sticky substance which enables him to catch ants. Three thousand ants have been found in the stomach of one Flicker.

The Flicker is a carpenter, as well as a doctor. I am going to tell you how he builds

his home. First he outlines his doorway like this. (Make a circle with dots.) He gets it just the right size. It is not so large that cats can come in, and not so small that he cannot get in himself. Could we draw a doorway just the right size for our house? He then uses his bill as a pick and begins to chip away the wood, to make a hole. He enjoys the work in the same way that we do when we build a house. Fig. 3.

LESSON III. *Comparisons*.—Use stuffed specimens, pictures of other kinds of Woodpeckers, and exchange material. Have the class discover points in which all Woodpeckers are alike. How may we distinguish them? The Downy and the Hairy Woodpeckers may often be attracted near schoolhouses and homes by hanging pieces of beef fat in the trees. Fig. 4.

SUGGESTIONS FOR CORRELATIONS

LESSON IV. *Language*.—Let the class suppose that they are Flickers, and tell about themselves. Ask each pupil to write a story on what one Woodpecker did as he watched it for fifteen minutes. In schools where children dramatize, it might be profitable and interesting to write a drama with the Flicker, an apple tree, and a fat baby beetle as characters.

The Flicker affords an unusual opportunity for word study. Mr. Colburn gave 36 common names of this species in the Audubon Magazine for June, 1887. The Country Life in America, July, 1913, says that there are 126 names. These names are nicknames, each of which gives a hint of some characteristic of the bird. Have the class determine which indicates the color, song, flight, and habits of the bird: Yellow-hammer, Pique-bois Jaune, Yellow-shafted Woodpecker, Yellow-winged Woodpecker, Crescent-bird, Clape, Cave-duc, Fiddler, Hittock, Hick-wall, Piute or Perrit, Wake-up, Yaffle, Yarrup, Yucker, Tapping-bird, High-hold, High-holder, and the High-hole.

The Woodpeckers have not attained the literary rank of the Bluebird, the Oriole, and some others. Walt Whitman speaks of "The High-hole flashing his golden wings."

LESSON V. *Drawing*.—Fill in outline drawings with colored pencils or water-colors. These outlines may be made on a hectograph. It is worth while to make different views, as a front view of the Flicker to show polka-dots and locket; side view, to show the moustache of Father Flicker or its absence in Madame Flicker, and the golden wing shafts; back view in flight, to show the white field mark, barred color scheme on the back, and the red patch on the back of the head. Simple drawings, to illustrate the story of the Flicker's activities, bring out skill and interest. Such a series of sketches might include the bird flying up from the ground; position on the trunk; head bent back for hammering; outline of a doorway; the completed mansion; the eggs in the nest; bringing food; the babies, with mouths wide-opened to receive the food, and the young on a limb receiving a lesson in flying. The food for the young, it should be explained, is invisible as it is partly digested in the alimentary canal. The process of feeding is peculiar since the food is literally pumped into the mouth of the young.

LESSON VI. *Manual Training*.—The construction of a home for the Flicker. Hollow out a small block of wood leaving the bark on the outside. The opening from the outside should have a diameter of two and a half inches. Modeling the home and eggs in clay is fascinating work for the younger grades. The Flicker does not build a nest. The eggs rest upon small chips, which probably fall to the bottom of the hole during the construction of the house.

LESSON VII. *Music*.—There are not many opportunities to correlate the study of the Flicker with music. The cry is rather difficult to imitate. The drumming is worthy of imitation in the elementary grades. Try to differentiate between the Flicker's drumming as a pastime and its picking for food. The noisiness of the Flicker may be contrasted with the music of some of our more accomplished feathered singers.

[The "suggestive lessons" given above show admirably the possibilities of bird-study in the ordinary grade school, and are the result of a trained instructor's fruitful experience. The average teacher possesses very little field experience, and it is this lack which a visiting nature-study instructor might help to supply in the way of outlining *methods of observation and presentation*. Too much has been expected of teachers, and, until they receive adequate assistance, nature-study will not make the progress that it should. Audubon Societies in every state might well embrace the opportunity to take the initial step in defining the most desirable methods for teaching bird-study as a part of nature-study.—A. H. W.]

THE DOWNY WOODPECKER

By GARRETT NEWKIRK

The Downy is a drummer-boy, his drum a hollow limb;
If people listen or do not, it's all the same to him.
He plays a Chinese melody, and plays it with a will,
Without another drumstick but just his little bill;
And he isn't playing all for fun, nor just to have a lark,
He's after every kind of bug or worm within the bark;
Or, if there is a coddling-moth, he'll get him without fail,
While holding firmly to the tree with all his toes, and tail.
He is fond of every insect, and every insect egg;
He works for everything he gets, and never has to beg.
From weather either cold or hot he never runs away;
So, when you find him present, you may hope that he will stay.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XVII: Correlated with Elementary Agriculture,
Botany and Entomology

THE BIRDS IN HARVEST-TIME

Among all northern peoples of whatever race, harvest-time is a welcome season, if sun and shower have done their work and untimely frosts have not occurred. The more civilized races attach great significance to the garnering of grain and crops, and no festival days are more genuinely observed than those that are set aside in gratitude for ample supplies against the long-continued need of winter and spring and early summer, in the sluggish latitudes of the north temperate zone.

Throughout the tropics, there is a more general distribution of the harvest-season, for lack of frost or sudden extremes of temperature, together with a periodical rainy season, combine to produce favorable conditions for wild and cultivated fruits and crops during most months of the year.

This one fact of even temperature and fairly uniform moisture explains the surprising negligence of tropical races in the matter of cultivating and storing

food-supplies. In the North, man must make some kind of provision for subsistence during the cold season, or face starvation. When we hear of widespread failure of crops, and consequent famines among peoples who place their main dependence on a single crop, as, for example, the failure of the potato-crop in Ireland, we get a new conception of what disappointment and misery the harvest-time may bring in certain parts of the world.

When, on the contrary, we read that millions of bushels of corn and wheat are safely harvested on our vast western farms, then we know that business will be more secure, as well as that numberless homes will have peace and plenty for the ensuing year.

There is much yet to be learned about growing crops and fruit successfully in different climates, so much, indeed, that all progressive governments employ men to study the soil, conditions of moisture, temperature, frost, and all else that has to do with successful agriculture in the interests of the people at large. Our own government publishes many bulletins each year about crop-culture, for the benefit of all who till the land.

One investigator is actually comparing the climates of different localities, in order to see how certain crops or fruits may be grown at any point on the earth's surface where suitable conditions prevail.

Birds need information about the location of food-supplies and their time of maturing, as much as man does; but how differently the bird must work out for itself its problem of subsistence! In the first place, a bird has the power of flight, which enables it to visit many different localities during the course of the year, and consequently, to avail itself of food-supplies in great variety. It is not surprising to learn that nearly every species of bird has a varied diet, and is capable of adapting itself to a changing food-supply readily.

Probably water-birds are more restricted than land-birds in diet, for what reason you can easily guess. How quickly water-birds may adapt themselves to new food-supplies has been demonstrated in zoölogical parks, where many different species are often successfully kept under artificial conditions. The Bob-white is an unusually good example of a species which varies its diet widely. It is not only insectivorous, but also strongly vegetarian in its feeding-habit. Experiments show that it will eat at least 149 different kinds of insects, as well as 129 different kinds of vegetable food. Comparatively very few species are strictly insectivorous or strictly vegetarian. Perhaps we should discover, if we studied the birds about us closely enough, that the most inveterate vegetarians now and then try a toothsome insect, or that most of the so-called insect-eaters do not occasionally disdain a berry.

It is well at this season to scrutinize our home neighborhoods very closely, in order to discover what sort of harvest awaits the birds. Many a weed passes our eyes unnoticed that offers a feast to seed-eating birds. It is not unusual to see a flock of Sparrows or Juncos apparently searching for food where nothing but a few sparse stocks or thin fringe of roadside weeds appear.

Quickly and thoroughly the tiny feathered gleaners take the unnoticed harvest, at the same time, ridding the land perhaps of some dreaded pest. The reason we so seldom notice the birds in the harvest-season is because they are scattered here and there in small groups, usually most of them having donned the inconspicuous post-nuptial plumage before the journey south.

Some of the permanent residents have a wide range of diet, as one may discover by following the movements of the Blue Jay. Not infrequently at this time of year, the Crow, in small or large numbers, may be seen hunting grasshoppers in pastures or mow-fields, a fact which every farmer should take into account. The vigilant Chickadee keeps an eye on its favorite insect prey, and locates the eggs of the numerous family of plant-lice, particularly of those which oviposit on apple, birch and willow trees. The eggs of the fall canker-worm, too, and cocoons of tiny moths, are greedily sought and much relished by this useful bird.

While the woodchuck is taking its last nap in the open, and the muskrat is beginning its preparations for winter, migratory birds are passing south daily, some in scattered groups, others in large flocks. Shrill crickets and rasping katydids or piping tree-frogs keep up an uninterrupted evening chorus, otherwise one might more frequently hear the calls of the flying travelers, especially on clear nights. Now is the time when bears are fattening for their winter sleep, and squirrels and raccoons—the one by day, the other by night—are visiting cornfields in search of the cultivated delicacy they so much prize.

It is a season of change and provisioning against the needs of winter. We recall the stores of nuts, the snugly-lined holes and lodges, the curiously-formed hibernacula, and the long, leisurely flights of the various mammals, insects and birds of which we have read in books; and who does not wish to see these things for himself instead of looking at them on a pictured page!

No better fall study can be made than exploring the harvest-fields of the birds; for, with their discovery, will come a knowledge of many plants, insects, mammals and invertebrate creatures along the shores, the river-valleys, in meadows, fields and forest, throughout the country, and even within the limits of large city parks.

SUGGESTIONS

1. Where do toads go during September?
2. What animals are mating? Which are living unmated? Do the young follow the mother or the father after the family separates?
3. What snakes are born now? Do any snakes lay eggs, and if so, when?
4. Observe ants. What kind of winter home do they make?
5. Do fishes change their habitat in the fall?
6. What kind of food is the deer likely to find now, and where?
7. Study the habits of wasps, bees and hornets.
8. What is the difference between a chrysalid, a pupa, and a cocoon?
9. What are *Cecropia* moths doing? Locusts and grasshoppers?
10. How many generations do plant-lice have during a year?

11. What becomes of the butterflies?
12. Study goldenrods and asters. What insects do you find on them? Do birds visit them?
13. Count the number of times a cricket sings per minute.
14. Does a change in weather affect the singing of crickets, and, if so, how?
15. Make a collection of weed-seeds, studying the distribution of weeds and the birds which feed upon them.

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 CRAGIN: Our Insect Friends and Foes.
 COMSTOCK: Insect Life.
 COMSTOCK: Handbook of Nature-Study.
 INGERSOLL: Nature's Calendar.
 GIBSON: Sharp Eyes.
 SHARP: Wild Life near Home.—A. H. W.

FROM YOUNG OBSERVERS

THE VALUE OF BIRDS

For the last two or three years I have been making a study of birds, and I am very much interested in them. We have an Audubon Society which meets every two weeks. There are thirty-six members.

The Mockingbird is one of the best singers of the United States. The Nightingale of Europe and the Mockingbird of the United States are valued the same for singing. The Mockingbird is one of the first to sing in the spring. In the states that border on the Gulf of Mexico the Mockingbird sings all the winter, and sometimes up to the northern border of the Southern States. He sings on a bright, clear February morning, when ice is on the trees.

The Cardinals are beautiful song-birds. They have for a long time been cage-birds. They have beautiful plumage and a beautiful song; that is why so many people have them for cage-birds. They are sometimes called the 'Virginia Nightingales.'

The Carolina Wren calls, 'Tea-kettle, tea-kettle, tea-kettle, sweet-william, sweet-william, sweet-william, come-to-me, come-to-me, come-to-me.' It has such a sweet tone!

The Robins are the most helpful birds. They kill a large number of insects in one day. They save the farmers' dollars by eating the insects that kill their crops. The people of Virginia passed a law that the Robins should not be killed. They go down South to stay through the winter where it is warm. The people down there go out at night with torches and kill them when they cannot get away. Down South the Robins eat some kind of berries most of the time. The berries make them drunk and they cannot fly.

The Bob-white or Partridge, which it is sometimes called, helps the farmers

by eating the worms off of the crops. The Bob-whites get in a circle, with their heads on the outside. When they see anyone coming, they fly away.

The Flickers and Woodpeckers save a lot of trees by picking the worms out of them. The people down South do not like the Woodpeckers because they pick holes through the oranges.—HELEN BODMER (age 10 years), *Aldie Graded School, Virginia*.

[Compare the observation that the Mockingbird down South "Sings on a bright, clear morning when ice is on the trees," with the fairly frequent records of its appearance in the North during cold weather. If a favorite food-supply should tempt this species farther north, it would probably adapt itself to the colder climate quickly.

The Cardinal formerly was found regularly on Long Island, and is at present a familiar resident of Central Park, New York City. The practice of caging this beautiful songster used to be quite common, even among kind and intelligent people. In Indiana, for example, the writer remembers meeting a good Christian woman who counted it no wrong to go out in the woods with a cage and capture Cardinals, a practice from which she derived some small gain. The familiar Robin offers many points of interest for study, among which are its feeding-habits during the year as it travels North and South. Will the observer describe the berries on which Robins get "drunk?"—A. H. W.]

HOME BIRD-STUDY

I am a boy twelve years old in the fifth grade, and I am very much interested in bird-study and belong to the Junior Audubon class. I am looking at the different kinds of birds every day. I have put up one bird-house, and my brother has put up two. I have seen just one Robin go into my bird-house, and that was on a rainy day. A mother and father bird make a nest in our thorn tree every year. I watch them build their nest every time, and there are two Barn Swallows that make their nest in our barn. They renew their nest a little every year. It is made like a little brick house, and sometimes they both go out together and sometimes the father bird will stay on the nest and let the mother go out. There is a Woodpecker's nest in our apple tree. I was looking at it this morning. It looked like a new nest. I think I have told you enough about birds. I have joined the Boy Scouts and we have a meeting every week.

—CLARENCE FITZWATER, *Branchport, N. Y.*

[It is a daily pleasure to feel acquainted with the bird neighbors in one's own grounds, as this observer shows in his description of nesting birds. Barn Swallows are particularly attractive to watch during the nesting-season, and, although not as neat builders as some species, no nest is more snug and secure than that of these Swallows. A second brood is reared sometimes in the same nest as the first, after a few repairs in the way of a layer of mud and fresh lining have been added.—A. H. W.]

THE PINTAIL

By HERBERT K. JOB

The National Association of Audubon Societies

EDUCATIONAL LEAFLET No. 76

Along the wild shores of Lake Winnipegosis, in northern Manitoba, in a region known as the Waterhen River Country, extends a wide belt of bog and meadow, back of which lies the unbroken, primeval, poplar forest. This forest abounds in moose and deer, and there covies of Ruffed Grouse whirl up before one into the low trees with surprising frequency, and gaze curiously at their first sight of man. The interminable strip of marsh by the lake harbors throngs of waterfowl of many sorts. Much of it is overgrown with a bewildering maze of reed, rush, and cane, dissected by narrow, winding, waterways, here and there uniting in open ponds. This is the home of such birds as the various Grebes, the Loon, Black Tern, Bittern, and the Canvasback, Redhead, and Ruddy Ducks. Other parts are more open and meadow-like. In one part this meadow is alkaline, and a series of shallow, brackish ponds and pools with muddy margins extends for many miles. Although the clouds of mosquitos bred in these pools are dreadful, compensations are present. Along these shores, late in May, feed tribes of migratory shore-birds in elegant nuptial plumage—Sandpipers, Plovers, the Lesser Yellowlegs, some Marbled Godwits, an occasional Hudsonian Godwit, an American Avocet, or a pretty party of Northern Phalaropes, swimming like tiny geese.

Out in the middle of the pools flocks of ducks disport themselves—all breeding in the vicinity. They are not very wild, and I can readily approach them behind tall grass or bushes, and, with my field-glass, see each one as clearly as though it were actually in hand. They are of the kind which prefers the shallow, open pools of the prairie sloughs. The males are in gaudy spring livery, and all swim in mated pairs, each of which has its nest hidden not far away in the old grass of the past season. Some are still laying eggs, and the partial sets are cleverly covered with a blanket of down plucked by the female from the under surface of her body. Others have covered their brooded eggs, and are out for a restful swim and luncheon with the lordly head of the house, who is too aristocratic to take his turn on the eggs, and will soon forsake his spouse to moult off his finery in remote recesses of the tangled bog. Conspicuous by large size among this company are some Mallards, contrasting sharply with the small Blue-winged and Green-winged Teals. That gaudy drake of moderate size, and his plain spouse, both with enormous bills, are Spoonbills or Shovelers. A few Gadwalls and American Widgeons also are to be seen. Yonder white-backed Lesser Scaups seemingly should be with



PINTAIL

Order—ANSERES
Genus—Dafila

Family—ANATIDÆ
Species—ACUTA

National Association of Audubon Societies

their deep-diving relatives, the Canvasbacks, but they nest in the grass at the edge of these shallow sloughs.

But what are those slender, elegant ducks, long of neck, agile of movement, the male an exquisite gray and white, with a long spike of tail held up carefully out of the water? At last I have found the Pintail; and it is well worth a journey of over two thousand miles to visit it in its summer home. It is a duck of distinction, clad with grace and beauty, with sprightliness of disposition, and a rakishness of form which together prove it of distinguished lineage. It is the greyhound of the anatine world, rather than the mastiff or collie. One



PINTAILS FLYING NEAR MARSH ISLAND REFUGE, LOUISIANA
Photographed by H. K. Job, New Year's Morning 1914

might even venture to term it the "sportiest" of the ducks—active, alert, possessed of real "style;" and, although moderate in weight, of sufficiently good food-quality. Though fairly shy and watchful, it is not hard to surprise it in the small reedy pools which it often frequents. The flock is likely to bunch when alarmed, and travels with ranks compact.

In one of these small alkaline ponds, on a small grassy island, where grew also a few low bushes and clumps of weeds, I found a nest, probably of one of those pairs I had watched through my glass. It was the fifth of June, a cold, stormy day. I had waded to the island, sinking to the tops of long boots, and had begun to beat about, hoping to start some duck from her nest. Suddenly there was a flutter and a spring, and a grayish duck with sharp tail-feathers shot into the air, and hurtled off, on her own wings and on those

of the keen northeast wind. What other duck of these marshes than the Green-winged Teal or the Pintail could quite hit that pace! She had protected her eight eggs from the rain till the last possible instant, and then made up well for lost time.

The nest was typical, a rather frail affair, about the size of the crown of a hat, situated in a slight hollow amid not very tall grass and weeds, quite near some low bushes—a mere little rim of dry grass, lined with a moderate amount of grayish down. The eggs were rather small and narrow for the apparent size of the bird, and were light buff, with a decided greenish or olive hue. This greenish tinge distinguishes them from the white and creamy eggs of the Gadwall or Widgeon, and from the brown eggs of the Scaup, all of similar size; while their size differentiates them from the eggs of the other ducks of that region. Hence an experienced person may pretty surely identify a Pintail's eggs even without seeing the owner.

The number of eggs in a set is likely to be fewer than in the case of the other ducks mentioned, nor is the maximum as large as with some. I have found probably about thirty nests of the Pintail. In records of twenty-one of these which were accessible, two had five incubated eggs, three had six, six had seven and eight, three had nine, and only one had ten. Its other neighbors very seldom have less than eight, nine to eleven being common. Of large sets, I have found a Golden-eye with sixteen, a Ruddy Duck, Redhead, and Canvas-back each with fifteen, and a Redhead with the surprising number of twenty-two, every one fertile.

No duck is less particular about nesting near water than this species. Though we may see the pair swimming in the sloughs during the nesting-season, the nest may be almost anywhere—perhaps on a dry island or elevation in a marsh, but, as likely as not, far back on the sun-parched prairie, where I have found nests a mile from the nearest water.

The Pintail and the Mallard are the earliest of the ducks to lay eggs. The ice does not disappear from those big lakes of the far Northwest till about the middle of May, but by the 25th of June I have caught young Pintails two months or more old, showing that the eggs were laid as early as the first week in April, when the country was still in the grip of winter. Most sets, however, seem to be laid early in May, though some are not forthcoming till late in the month, very possibly after an early set had been frozen or flooded.

The downy young are very different in appearance from the young of other river-ducks. Instead of being yellow and brown, they are brownish black, mottled with whitish above, and with grayish white on the underparts.

These earliest broods are able to fly by the middle of July, whereas the late-breeding Scaups and Scoters do not mature their young before the first week of October. By early August there are considerable flocks in the prairie sloughs of young Pintails and Mallards. Having had as yet no experience of man they are then quite tame, and it is great fun to creep close up to them

with the reflecting camera as they feed in the small ponds in the marsh. Away they go with a thunder of wings when one steps out from the rushes on the edge, and one may get splendid "shots" just as they spring into the air. Even thus early they are well practised in the long standing jump.

Maturing so soon, they begin to migrate rather early, so that flocks appear south of their breeding-range in the northern states early in September. Yet they are hardy, for some winter as far north as Long Island Sound, and in various localities they linger until ice forms. They winter on our southern coasts, and down through Mexico to Panama. Early March sees them moving back through the United States again, and by the last of the month some are on their more southerly breeding-grounds. They breed mostly in the interior and western districts, especially in the prairie states, northward from Iowa and Nebraska, commonly in North Dakota, and north to the Arctic coast. Cosmopolitans, they are well known in Europe also.

Though not given much to quacking, like the Mallard and Black Duck, they utter now and then a subdued quack, but more often express themselves in a soft chattering or low whistle. For the most part I have heard little sound from them, but they are said at times to be noisy.

Like most ducks in fresh water, the Pintail devours all sorts of insects and small aquatic creatures, snapping eagerly at flies and mosquitos on the wing. It is fond of succulent water-plants, such as wild cherry, eating both roots and seeds, and even of nuts, where these grow not far from the water. Ponds are preferred to streams, and in winter grain-fields, meadows, and even the prairies, have attractions.

In the West, where there are prairies and marshes, this is one of the most abundant ducks, but in the East it is rather scarce. There, fearful of ever-present persecution, the few that do come to us slip so furtively at night into ponds and meadows that few besides the keenest of gunners detect their presence. How difficult seems the harried fowl in the hunting-season from the beautiful "greyhound of the air" on its breeding-grounds, so gentle when it has less to fear. Would that the new era of Federal protection might make more abundant everywhere this beautiful, graceful wildfowl!



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5.00 annually pays for a Sustaining Membership
\$100.00 paid at one time constitutes a Life Membership
\$1,000.00 constitutes a person a Patron
\$5,000.00 constitutes a person a Founder
\$25,000.00 constitutes a person a Benefactor

A DEPARTMENT OF APPLIED ORNITHOLOGY

A Department of Applied Ornithology, created by the National Association of Audubon Societies in response to a new trend of interest, as revealed in a notable public demand, is the latest up-to-the-minute fact in wild-bird conservation.

The public, having been educated to appreciate bird-protection, and aroused to great interest in wild life, not only frowns upon the slaughter of birds, but is becoming eager to do something definite and practical to increase them. This is especially true of those who own estates, where the owner may see and enjoy the fruits of his effort to attract and preserve birds.

More and more people are feeding wild birds, and providing them with nest-boxes and nest-building materials. Many tracts of land are being employed as preserves and refuges. Park commissioners, clubs, and real-estate companies are seeking expert advice to increase wild bird-life, as a means of enhancing the attractiveness of public parks or of private property. Many persons are finding in the breeding of game-birds and water-fowl on their estates an absorbing recreation. Surprising numbers of wealthy men have gone into this. Farmers and others are attracting birds to protect their harvests, and are beginning to breed edible species for profit. Positions are opening

for trained men as game-breeders, skilled wardens, or managers of estates where birds are to be bred.

So many requests for help and information along these lines have come to the National Association of Audubon Societies that the Directors have felt for some time that it would be wise to establish a Department of Applied Ornithology. Herbert K. Job, lately State Ornithologist of Connecticut, has been appointed Economic Ornithologist in Charge. He has been experimenting and studying along these practical lines for many years.

Mr. Job will be in position to give personal assistance to commissioners of city parks, to owners of estates, and to any others needing instruction in the best methods of increasing wild bird-life by artificial means. It is the purpose of the Association to use his services in such a way as to be of the greatest good to the cause, and it expects to accomplish this end by means of lectures, bulletins, correspondence, and personal visits.

Special funds have been subscribed by members and friends of the Association, to open and develop this important and tremendously useful field of effort. Members and others who may be interested in taking advantage of this new line of the Association's work are invited to correspond with the home office.

THE CRUISE OF THE AVOCET

Illustrated from Photographs by Edward H. Forbush



LL along the coast of Maine are numerous rocky islands, which afford ideal summer homes for various kinds of seabirds that swarm over the waters of our North Atlantic. In fact, this interesting region

is the greatest nursery of sea-fowl on our entire coast. On the thirty-five rookery-islands known to have been occupied the past summer, more sea-birds gathered to rear their young than were to be found in the entire stretch of coast between Maine and the extremity of Florida.

On July 12, the writer, in company with Mr. Edward H. Forbush, boarded at Bar Harbor the commodious yacht *Avocet*, owned and commanded by our matchless host, Mr. William P. Wharton. For eight days we cruised, visiting in turn one after another of the sea-bird colonies, inspecting the work of the Association's fifteen wardens, and making notes on the bird-life that was found. For thirteen years most of these islands have been guarded in summer, and the increase of the sea-bird population has been enormous.

Hosts of Herring Gulls

Without doubt, the most numerous water-bird of the region is the Herring Gull—that splendid, long-winged flyer so common about our eastern harbors during the winter and early spring months. Thirteen islands are now used by them as breeding-places. On the island of No-Man's-Land not less than 30,000 are believed to assemble in summer. The large, handsome eggs are laid in nests on the ground, sometimes among vegetation and often on the bare rocks. On a few of the islands individual Gulls construct bulky nests in the evergreen trees.

After hatching, the young quickly

leave the nest and run about among the bushes and rocks at will. When approached, they show a wonderful ability to hide, and we often found them wedged in under boulders, or squatting flat among the thick growths of raspberry bushes. We found it difficult to induce them to stand still to have their photographs taken. It took the three of us about twenty minutes to get the picture of the two downy young shown standing on a rock in one of the accompanying illustrations. We discovered, however, that by placing a young Gull on its back and holding it there for a minute or two it would become very docile, and would submit without further resistance to the ordeal of having its picture taken.

The young suffer much from the attacks of old Gulls. Many dozens were found which had been killed by picking on the head; in fact, on more than one occasion we witnessed a heartless attack of this kind.

It was rather difficult to approach close enough to the adult birds to get good photographs. Mr. Forbush, however, erected an umbrella-blind in the colony on Great Duck Island, and by means of fish-head bait secured several photographs of hungry Gulls at the very satisfactory distance of six feet.

Terns and Their Troubles

Arctic and Common Terns abound in these waters. There are not less than twenty islands where they breed, and small colonies of a few pairs each are scattered about on many isolated ledges of rock. They appear to nest later than the gulls, for we found numbers of eggs unhatched, although some young were sufficiently advanced to fly with ease. Like the Gulls, they often lay their eggs on the bare rocks, with no suggestion of nesting material. From these insecure positions the eggs are often rolled away by the wind. On Eastern Egg Rock several hundred



THE YACHT AVOCET

abandoned eggs were found. They had been washed off the rocks by a recent storm. This is an illustration of the natural vicissitudes to which these birds are subject, and which make human protection so necessary under present conditions. The lobstermen of the region do not, as a rule, distinguish between the two species of Terns, but call both "Mettrix."

Elusive Petrels

No casual observer walking over one of these colony islands would dream that any specimen of the "Mother Cary's Chicken" was near; but under the edges of logs, stumps, and boulders, openings to underground passages may be discovered. Run your hand into one of these, and you are pretty sure to find a



MR. FORBUSH ERECTING A BLIND ON GREAT DUCK ISLAND. AUDUBON WARDEN JOSEPH M. GREY ON THE LEFT



YOUNG GULLS, PHOTOGRAPHED UNDER VARIOUS CONDITIONS



NEST AND EGGS OF HERRING GULL

Leach's Petrel. If this be in the midst of a Tern colony, toss the bird in the air, and immediately every one of the hundreds of Screaming Terns that are flying about overhead will cease their cries and fly like mad toward the open sea. They act as though they had seen a ghost. Petrels begin to lay their eggs here about July 15, and the warden on Great Duck Island says they continue to breed until so late in the autumn that often the old and young are frozen in their nests.

One night we lay for a time on a bed of evergreen boughs among the rocks of Little Duck Island. By half-past eight o'clock the cries of the last belated homecoming Gulls had ceased. For a time all was quiet. Then suddenly, in the still night air, peculiar un-bird-like sounds began to come out of the darkness all about us. The great army of Petrels, which had been feeding at sea all day,

had begun to arrive, and from the mouths of their nesting-burrows they were calling to their mates, which since early morning had been guarding the subterranean nests.

Other Birds

Most of the sea-bird islands are inhabited by small colonies of Black Guillemots, and as they fly up before the boat, or wheel past you as you clamber along the rocky shore, their red feet and white wing-patches give them a most characteristic and interesting appearance. Their eggs and young are well hidden under the immense windrows of gigantic boulders against which the waves continually beat.

Puffins are found nesting on Machias Seal Island in the mouth of the Bay of Fundy, but ordinarily they do not breed south of that point at this time. Probably fifty or sixty pairs of Eiders hatch



HERRING GULLS PHOTOGRAPHED AT A DISTANCE OF SIX FEET



LEACH'S PETREL AT THE MOUTH OF A NESTING-BURROW

their eggs every summer on the guarded islands of the Maine coast.

Ravens are not uncommon on these islands, and we found them on at least two occasions. Apparently their nests are usually built in evergreen trees. Just what damage they do in the bird-communities is not known with certainty, but we strongly suspected that the remains of a dozen young Night Herons found in one colony bore mute testimony to the powers of this magnificent representative of the family *Corvidæ*. It is well known that elsewhere Ravens are a pest to breeding-colonies of Sea-birds.—T. G. P.

TENTH ANNUAL MEETING

Notice to Members

The Tenth Annual Meeting of the National Association of Audubon Societies will convene at ten o'clock, A. M., on Tuesday, October 27, 1914, at the American Museum of Natural History, West Seventy-seventh Street and Central Park West, New York City.

A program of more than usual interest is being prepared, and it is hoped that there may be a large attendance of members and their friends.—T. GILBERT PEARSON, *Secretary*.



YOUNG GREAT BLUE HERONS AND THEIR NEST, ON BRADBURY ISLAND



A CAT WITH A ROBIN



A TRAP FOR CATS

WHAT ABOUT THE CAT?

Wilbur Smith, of South Norwalk, Connecticut, has sent the accompanying photograph of a cat, with remarks:

"My neighbor's cat came into our yard and pounced upon a Robin. The delighted neighbor said, 'She is a fine hunter,' while another remarked, 'It is the cat's nature.' Most of the winter birds in one neighborhood in which I am acquainted were killed and eaten because the suet was placed where the cats could catch the birds while feeding.

"I saw seven cats tied in a dooryard to keep them from catching birds; but some young Robins came out of a nest

and the *tied cats* caught three of them. Surely, any observant person can see that the cat is a great menace to our wild birds. When shall we grapple with the cat evil?"

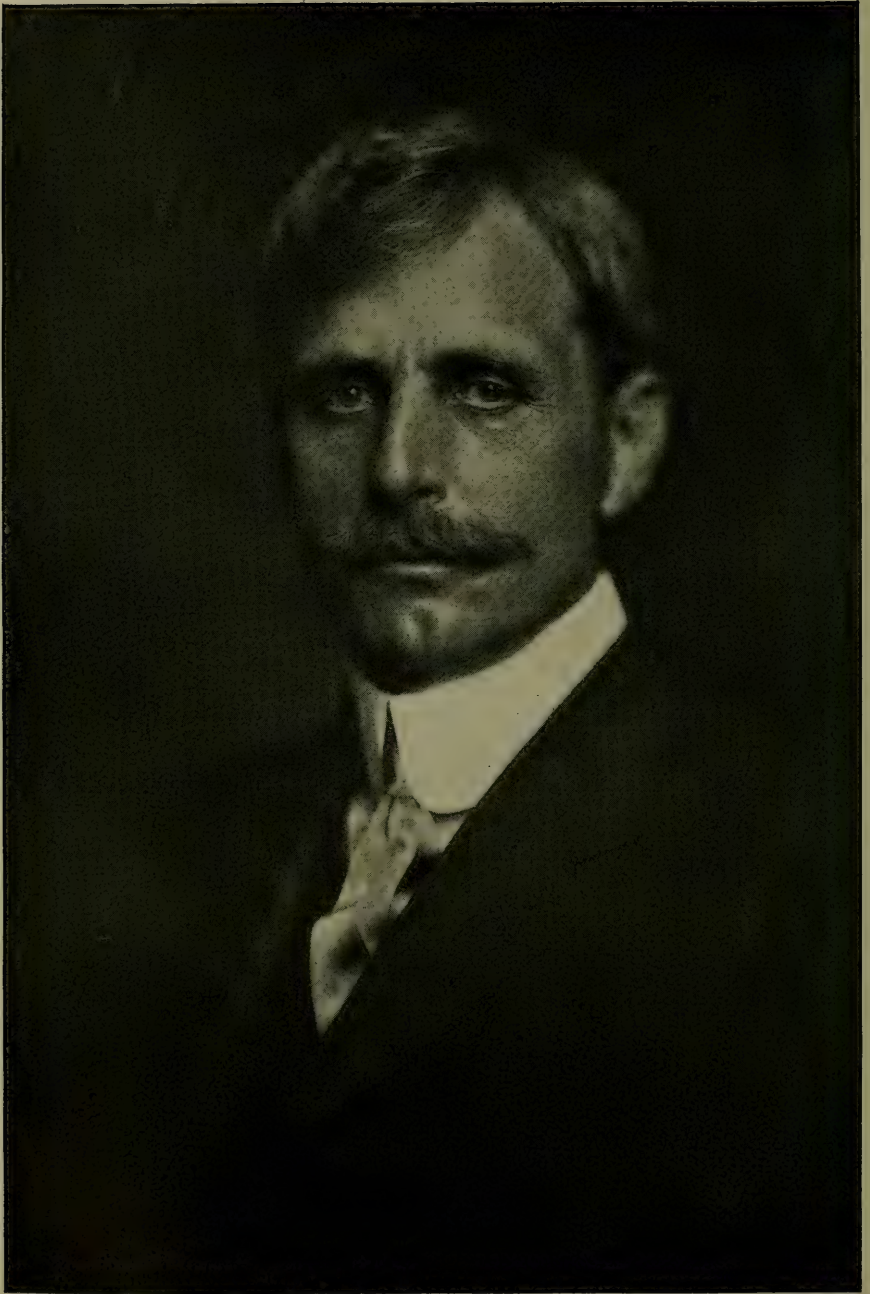
At Hempstead, on Long Island, New York, lives G. W. Pewksbury, who is a lover of birds and an enemy to stray cats.

He has sent a photograph of the trap he uses in capturing cats, which is built after the manner of the old-fashioned "rabbit gun." This trap is nine inches square and twenty-nine inches long.

"I bait it with fishheads," writes Mr. Pewksbury, "and with it I have made a record of fourteen cats in one month."



HERRING GULLS FEEDING IN TURNCOAT HARBOR, MAINE



GEORGE PAYNE McLEAN
United States Senator from Connecticut

SENATOR GEORGE P. MCLEAN

The one big outstanding figure for bird-protection in the Congress of the United States is George Payne McLean, Senator from Connecticut. There are, of course, many men in Congress who may be depended on to always stand for the conservation of wild-life, but Senator McLean is the one ever on the alert, who rounds up the friends of the birds when times of stress arise. If they are slow in mobilizing, he is the redoubtable Belgian who throws himself into the path of the invaders of the rights of the birds, and holds them in check until the forces of the country can come to his assistance. He has done this sort of thing over and over again. This is the gentleman who is the father of the Federal Migratory-Bird Law, which is so often referred to affectionately as the "McLean Law." It was his speech, delivered on the floor of the Senate last year, in favor of the Plumage Law, that carried the day, and won for America the distinction of being the leading nation on earth in the matter of bird-protective legislation. He is known as "the bird man" of Congress.

Here is an instance that will serve to show his influence with his colleagues:

Last spring, the Finance Committee of the Senate decided to starve the Federal Migratory-Bird Law to death by cutting off all financial support for its enforcement. This action was taken after the House had passed the Agricultural Bill, in which an appropriation of \$50,000 had been provided for the enforcement of this measure. The committee was determined that no money should be made available for this purpose. Many of us had made appeals, but all in vain. Senator McLean went before the committee, stated the case forcibly, and asked them to reconsider and vote an appropriation of \$10,000. He felt sure that if they would do this he could get the original amount put back when the committee made its final report and the matter came up on the floor of the Senate. Mr. McLean, remember, is a pronounced Re-

publican, and the control of the committee was in the hands of dyed-in-the-wool Democrats. What happened? Just what those who know Senator McLean and his influence expected would happen. The committee gave him the \$10,000, and later the Senate made the appropriation \$50,000.

The Audubon Association and other organizations may labor with all their might for federal legislation, and do much good in stirring up the country to demand protection for the birds; but Senator McLean, more than all others combined, must be given the credit for actually steering our two most important federal laws through the machinery of Congress.

Few persons not members of Congress, or among those who know him intimately, are aware of his great work for the birds. He is modest to a most unusual degree. Perhaps that is one reason why his colleagues esteem so highly his opinion; they know he is not trying to make political capital of his achievements. After he has won a great battle for the birds in Washington, he does not boast of his accomplishments, but straightway gives the credit for his work to others. Here is a typical example: After the Government appropriation above referred to was secured, he sat down and wrote the Secretary of the National Association as follows:

"Too much praise cannot be given to your Association for its assistance in the fight for the appropriation. We carried the Senate by more than two-thirds on both votes. This could not have been done but for the intelligent and timely appeals to senators emanating from the Audubon Societies and friends of the birds throughout the country."

Everybody loves a generous man, and Senator McLean is generous, as well as strong, influential, and powerful. He first entered the Senate in 1911, and, for the good of the birds and the benefit of mankind, let us pray that he may remain there for very many years to come.



LANDLORDS OFFERING BIRD-HOUSES FOR RENT

MAKING PORTLAND A BIRD CITY

Mr. William Finley, the National Association's Field Agent for the Pacific Coast, has been greatly interested in fostering the work of the Audubon movement in the schools of the far West. In a recent report to the home office he said:

"During the past season, the children of the Portland, Oregon, schools have

built eight thousand bird-houses, and placed them in various parks and about different sections of the city. The greater number of the houses have been built by the pupils of the manual-training department of the different schools. The work has been encouraged by the Board of Education, and is under the direction of



PORTLAND SCHOOL-BOYS MAKING BIRD-HOUSES

L. R. Alderman, City Superintendent of Schools.

"Reports from the children show that a large number of the bird-houses have been rented to native songsters, the greater part to Violet-green Swallows, then Parkman Wrens, Bluebirds, and Chickadees. Of course, many of the houses, especially about the more thickly settled part of the city, were seized and held by English Sparrows. Some of the boys outwitted the Englishers by making the doorways too small for a Sparrow, but large enough for a Wren or a Swallow. Others have been very successful by placing about their homes one or two houses for the English Sparrows, within ten or fifteen feet of the ground, and then putting attractive homes for the Swallows and Bluebirds higher up, or near the third story.

"The remark is often made by parents and teachers that the attitude of boys

toward birds and animals has greatly improved throughout Oregon during the past few years. The making of bird-homes and renting them, and the feeding of the hungry birds in winter, have created a comradeship much needed between wild birds and children. The value of the Junior Audubon Society work cannot well be overestimated."

Recently a teacher in one of the Portland schools said:

"The interest of my pupils in their wild-bird friends is shown remarkably in their school-room work. They are more wide-awake and sympathetic. The experiences with the birds which they relate form the most interesting lessons of the day. Play is closely related to work. Three of the boys who were the most difficult to manage are now the easiest to handle, since they have begun to build and rent their bird-houses."

THE FIRST BIRD FIELD-DAY

What is believed to be the first Bird Field-Day ever held anywhere was enjoyed at Worcester, Massachusetts, in Green Hill Park, July 22, 1914, under the combined auspices of the State Grange, the State Board of Agriculture, and the State Audubon Society; and this department of BIRD-LORE has been furnished with an admirable report of the proceedings by one of our members, Mrs. O. E. Marshall, to whom we return our thanks and compliments.

"The idea of such a field-day," Mrs. Marshall writes, "first occurred to Mrs. George S. Ladd, of Sturbridge, Lecturer of the State Grange. She proposed it to our State Grange committee on bird-protection, and was referred to Edward H. Forbush, to whose efforts, and to the enlistment of Winthrop Packard, Secretary of the State Audubon Society, and Wilfred Wheeler, Secretary of the Board of Agriculture, we owe a splendid success, and the presence of a thousand people at the park. The occasion was advertised by the State Grange Master as one of his

field-days; by the Board of Agriculture in a beautiful colored poster sent to all post-offices; and by Mr. Packard, who sent post-cards to members of the Audubon Society. Mrs. Ladd also did fine advertising in the Worcester papers, giving pictures of the speakers to the press.

"The morning was passed in looking over the Audubon exhibit of bird-boxes, including a set recently invented and manufactured by Mr. Forbush, and called the "Pindale;" in examining the Reed collection of stuffed birds at the museum on the grounds; and in a bird-game, which consisted in identifying birds by their pictures, of which seventy-one were displayed. Eighteen prizes were given, consisting of bird-boxes, the book "Land Birds," packs of bird post-cards, suet-bags and the Reed bird-game, C. K. Reed having contributed twenty-five of these games for the purpose. Fifty-two persons took part, and it is interesting to note that three persons made sixty-eight correct identifications out of the possible seventy-one.

"Mr. Raymond J. Gregory, of Princeton, chairman of the State Grange's committee on protection of wild birds, presided at the afternoon meeting, and the speakers were E. E. Chapman, of Ludlow, the State Grange Master; Wilfred Wheeler, who promised the coöperation of the State Board of Agriculture in future work; Winthrop Packard; E. H. Forbush; and Mrs. Ladd, who announced that the State Grange would hold ten Bird Field-Days next year, and would present fifty bird-boxes to school-children for meritorious work in the places where these field-days should be held. At the close of the speaking, bird-walks about the grounds were taken with several leaders, and despite the unfavorable hour for seeing or hearing birds, one party found twenty-three, another twenty, different kinds.

"On the next day, the same program was repeated so far as possible in Pittsfield, with the addition of a pageant under the supervision of Mrs. John Noble; but, as the weather was very unfavorable, much of the field-work was omitted."

A conference of New England grange lecturers at the College of Agriculture at Amherst during the following week, called by Mrs. Ladd, had a bird period, on July 30, at which Mr. Gregory presided and made an address, and Messrs. Packard and Forbush and Mrs. O. E. Marshall spoke. It was declared to be the most interesting period of the two-days' conference. The principal address was that on "Special Bird Work," delivered by Mr. Raymond J. Gregory.

"The subject presents to my mind," said Mr. Gregory, "two sides for development—the esthetic and the economic. Because we, as Patrons of Husbandry, are intensely interested in agriculture, we should realize that birds are of as great value to life esthetically as they are from an economic standpoint. Each may work independently of the other, but the best results are to be obtained when both are considered. Therefore, note the flight, song, and plumage of a bird, as well as study its economic relations to its surroundings. A true bird-student should

be as eager to try to understand one class of facts as the other.

"It is highly important that every state should have its ornithologist. If I am not misinformed, but one of the six New England states has such a salaried officer today, and a comparison of the laws in the statute-book of that state with the laws of the others reveals a surprising difference in the development of that live question, which is always before the bird-lover, namely bird-protection. Now let me urge you to begin, when you return to your homes, to work through your grange to create a public demand for such a state officer and for his appointment. Plead your case before your State Board of Agriculture, under whose jurisdiction an ornithologist would be placed. Impress on your state master the exceedingly close and extremely important relation of birds to agriculture. Let him be informed of the wishes of the people of the grange by a little publicity campaign, and there isn't a state grange master in our land but would rise to the occasion and create a bird-protection committee.

"If you haven't within your grange membership noted students, do not let the subject pass without action. It is almost impossible today to find a section of our state where there is not at least one bird-protectionist. Just make your best selection and get into touch with your master, and in a short time your bird-committee will have become a live wire.

"What will be its duties? To watch the state legislature to see that the existing laws are not changed to lower the bars of protection; to seek to enact laws for the establishment of close seasons for those species that are in danger of extinction; to make possible the establishment of state preserves, where all kinds of life may find a haven of rest and security. In Massachusetts many town-sanctuaries are being established under the supervision of the Fish and Game Commission. The land-owners simply waive their rights to hunt or fish on these lands for a certain period of years; then the state

steps in, posts the area, and during the hunting-season has the land patrolled by a warden.

"Work for the enactment of a law which grants to each town the privilege to appoint its own town bird-warden. A law of this sort went into operation in Massachusetts in 1913 for the first time, and already two towns have availed themselves of it. The duties of the warden would be to arouse interest in birds in his locality; to visit the schools of the town and talk on the subject to the children; to patrol the public lands and preserves within the limits of the township; to put up bird-boxes and shelter-houses, and in winter, when the ground is covered with deep snow, to feed the birds. I tell you the idea is grand, and you will be amazed how quickly benefits will develop when once you have aroused the public to the importance of bird-life in its community.

"Many subordinate grange lecturers are at sea as to what to plan for their bird-night, and every subordinate grange should have its bird-night. If a speaker is desired, this bird-committee will be the proper bureau to secure one, and also to prepare a program. These are a few of the duties which befall a state grange bird-protection committee.

"Now, addressing those of you whose homes are in other states than Massachusetts, if you haven't such a committee begin at once to work for it. It has impressed me as just as important a function to perform in our grange life as any other, and the state grange which fails to include this committee within its organization is not alive to its opportunities, and fails to recognize a very important branch of our agricultural life. Much effective work can be accomplished by the organization of a grange bird-club. Let this club be the local bird-committee, and to it refer all matters of ornithology. Carry the message also to the school-children. You will be swept off your feet by the interest and ardor of these little people, who always prove to be keen students. It is through these same children that the parents at home most frequently receive

this light. So interest the children. Then, as a club, take bird-walks. I have yet to take a bird-walk upon which I did not gain added knowledge of bird-life, or from which something out of the usual did not take place.

"Finally, I wish to encourage you to plan for state grange bird field-days. This idea is entirely new in this country. Not until the recent meetings in Worcester and Pittsfield had there ever been Bird Field-Days. I regret all of you could not have been present to have received some of the enthusiasm with which every one seemed imbued. The attendance was very gratifying, more than 1,000 at Worcester and 300 at Pittsfield, the inclement weather at the latter place undoubtedly keeping many away. It is the purpose of the Massachusetts State Grange, through its bird-committee, to make the Bird Field-Days an annual affair, and already an invitation has been received to hold the next one in Franklin Park, Boston.

"We propose to leave in every place a memorial to the birds in the way of fifty bird-houses, which, under proper supervision, will be distributed among those school-children that by their interest in bird-lore have merited a reward.

"Do all in your power to attract birds to your town and premises; establish sanctuaries, and put up every year bird-houses, which now may be obtained cheaply, or which may be made at home. Insert on your lawn, or on public grounds, bathing-places for birds (make them not more than two inches deep, with sloping sides); plant shrubbery about your house and grounds, the kinds that bear the berries birds feed on; and when winter comes, and with it the deep snow, don't forget the birds in the village as well as in the woods. Feed them often, and you will be surprised at the results your efforts will bring you. If you only strive to accomplish these results, even if you may fail in many cases, I know that you will find yourselves because of your association with out-of-door life, better men and women, stronger to carry on life's work."



**MRS. HARRIET MYERS AND THE CONVALESCENT
PHAINOPEPLA**

In the garden of her beautiful home in Los Angeles, Mrs. Harriet W. Myers, Secretary of the California Audubon Society, erected a few years ago a comfortable and commodious "bird-hospital." Here, sick or injured birds are safely kept until they can be restored to freedom. A photograph of this unique institution was reproduced in *BIRD-LORE*, Volume XV, page 73. Many birds are treated in the course of a year, and Mrs. Myers believes that her experiments have demonstrated the perfect feasibility of such an undertaking. The bird shown is one of the Silky Flycatchers, allied to the Waxwings, of our Mexican border.



THE LAST PASSENGER PIGEON

"Martha," believed to be the last Passenger Pigeon on earth, died in the Zoölogical Garden at Cincinnati, at two o'clock P. M., September 1, 1914. She was hatched in captivity twenty-nine years ago. This marks the passing of the last survivor of a species whose vast flocks, up to a generation ago, were the ornithological wonder of the world.

The National Association, realizing the widespread interest in this deplorable incident, announced that it would give to anyone, on request, its Leaflet No. 6, with a portrait of this Pigeon in colors. The response was immediate, and from all over the country, so that about 2,500 copies were sent out, many of them to persons of great influence and social prominence. This is an admirable indication of the widely diffused and highly intelligent interest in birds and their preservation.

BIRDS AND THE ARMY-WORM

The past summer has witnessed an unusual invasion of the eastern states by the army-worm. In many sections its raids on vegetation have occasioned much concern and actual loss. How to meet its advances and check its onslaught has claimed the attention of many gardeners and farmers, and by the advice of entomologists poison has been resorted to. Testimony received at this office from several places tends to show that there is grave doubt as to whether this is the wisest course to pursue in dealing with the army-worm scourge. Frederic L. Thompson, an artist, writing from Chilmarm, on the island of Martha's Vineyard, Massachusetts, says:

"There has been an invasion of the army-worm here, and I notice the Government issues pamphlets on the subject of its destruction; among other things it advises the use of bran mixed with paris green. This mixture kills thousands of song-birds, as I have found here. As this is being done all over the country, the loss of song-birds must be great. I also noticed Chewinks and Catbirds eating the worms, and I think this fact should be brought to the attention of farmers."

The observations of Edward A. Gill Wylie, a lawyer at No. 149 Broadway, New York, are well worthy of careful reading. He writes: "The present plague of army-worms, which this summer was so prevalent in New Jersey, New York, and New England States, provides a severe example to us of one of the many reasons why the number of insectivorous birds should not only be conserved but materially increased. A horde of these pests suddenly came to light on a small place about four acres large, within one hundred yards of where I am this summer living, on the Rumson Road, New Jersey. Immediately the birds of the neighborhood deserted their usual haunts and assembled on these four acres. I personally counted sixty-three Robins, Thrushes, Catbirds, and Meadowlarks at one time on a little

square of lawn about 120 by 60 feet, and feel confident that, as this was at high noon, it was not their busy time of day. I was informed by the gardener that they ate so many that often a bird would disgorge and proceed to make a fresh start, and that at least one-half of the worms were consumed by them in the two days which elapsed before the spraying by experts commenced to destroy what was left—and their number was legion. Incidentally, this spraying of four acres cost the owner of the property \$60 a day.

"Under the eaves of my porch is a little family of House Wrens, the four younger members of which were hatched about two days before the army-worms appeared. Several times during the course of the plague I counted twelve trips in ten minutes to the nest of the parent-birds, with food, always army-worms. How the young ones could stand the quantity they ate was a marvel. The old ones would fly direct to the source of supply, and would return almost immediately with a whole worm, stop under a near-by hedge, chop off from the whole a suitable morsel of swallowable size for the little ones, fly up to the nest, and then away for a fresh one; never returning to get the remainder of the old worm, but seemingly preferring a fresh one. Their diet consisted, so far as I could ascertain, of the army-worm, until the final destruction of the army was accomplished by man and his feathered friends. Even moths were ignored, and several fat little spiders built a web within ten inches of the nest and were entirely undisturbed."

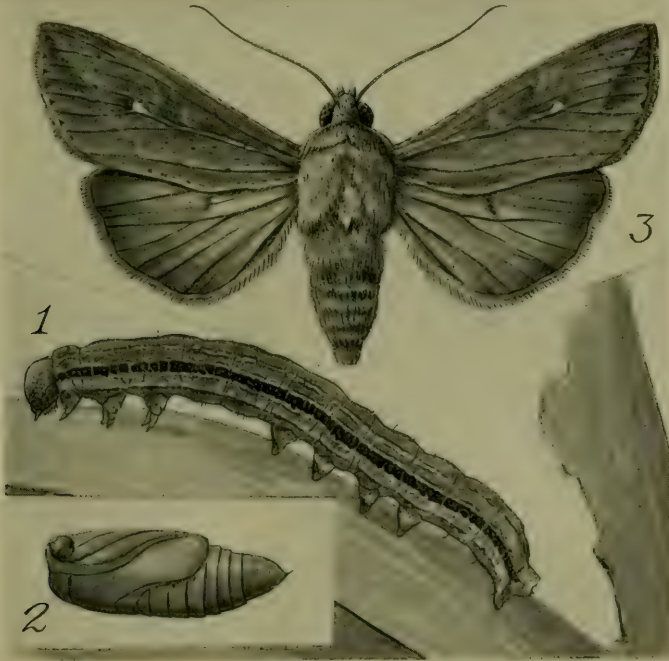
Testimony of Mr. Forbush

Edward Howe Forbush, the foremost economic ornithologist of New England, reports, under date of August 10, 1914:

"I have been looking over the destructive work of the army-worm in this state. While the worms have been quite destructive in Wareham, Massachusetts, they have done no harm at all on my farm.

In fact, you would never know from the appearance of vegetation that there was a worm on the place. I have taken extra pains this year to attract the birds, and they have eaten a great many of the worms. Thirty or forty rods away from my place the worms are beginning to be destructive, and in other parts of the town they have done a good deal of harm. They have done no appreciable injury on other farms where I have put up nest-

this year, birds were very plentiful, as the boxes were nearly all occupied, and they were feeding on the army-worm in large numbers. Recently I saw here quite a number of Heath Hens apparently feeding on the army-worm. Where poisoned bran was used in trenches to kill the worms on a large estate formerly owned by Professor Shaler, very few birds were seen, and we had several reports that dead birds had been found along the trenches, but I got



THE ARMY-WORM

1. Caterpillar; 2. Chrysalis; 3. Adult Moth (*Leucania unipunctata*)

ing-boxes in quantities. In Martha's Vineyard, the army-worms have cut corn-crops to the ground. It is rather significant that the worms have done the most harm where poisons have been used to check them. Where no poison has been used, and where the birds have been attracted, the worms (although very numerous) have not done very much harm.

"On the state reservation, where the Heath Hen has been protected, and where a great many nesting-boxes were put up

there about a week too late and did not see any personally. I hear that a good many Blackbirds and Robins have been poisoned, and that Quail have disappeared where the poison has been used."

In another letter Mr. Forbush adds: "I am under the impression that if fresh grass were sprayed at night for the worms, it would be just as effective as the bran, and there would not be so much risk of the poisoning of birds. Some of the entomologists recommend this."

So alarming were these and other complaints received that the Association at once sent out warnings, urging the public to desist from the practice of scattering poisoned bran. There seems little reason to doubt that even scourges of worms can be kept well in check, especially in the thickly settled parts of our country, if people only will take the precaution of increasing the wild-bird population by simple methods of attracting birds in greater numbers. The association's recent Bulletin No. 1, entitled "Attracting Birds About the Home," contains many useful hints on this subject, and a copy will be sent without charge to any reader of BIRD-LORE on receipt of two cents to cover cost of transportation.

Another Suggestion

Mr. Archibald C. Weeks of Brooklyn, New York, comes forward with the following suggestions in the *Brooklyn Eagle*:

"Its development expedited by the recent warm, humid weather, most favorable for insect generation, the moth of the army-worm (*Leucania unipunctata*) is just beginning to emerge from its pupal case. The first one noticed by me in the center of Long Island was on August 15. The moths conceal themselves among dried grass and other withered vegetation, their light, ash-colored upper wings almost exactly matching their environment, and rendering them discoverable only when the wings are expanded in flight. Close scrutiny is required to detect the moths after they alight. These moths will shortly lay their eggs in abandoned fields of grass and weeds, and one more brood at least will be perfected before frost comes.

"All fields of this kind should be plowed

at once, or burned over when possible, for thus further generations will be forestalled. As my man and myself were raking along the border of a large field on August 15, preparatory to plowing, I was pleased to witness the excellent work of one of the Flycatchers. As the insects disturbed by us took flight and skimmed over the herbage, the bird, on the alert in the neighboring tree-branches, would swoop down so swiftly that the eye could scarcely note its flight, and with unerring skill snap up its prey. It circled about fearlessly within a few feet of us, and followed us as we moved along, never permitting a moth to escape. As every victim, if a female, represented at least 250 possible larvae, the benefit conferred by the activities of this bird cannot be over-estimated."

Is Insect Poison Dangerous?

Dr. L. O. Howard, entomologist of the United States Department of Agriculture, when asked, on August 30, 1914, his opinion of danger to birds from the use of insect-killing poisons, said that the Department had no evidence of a single bird having lost its life from this cause. Dr. Henry W. Henshaw wrote to this Association some time ago that the Biological Survey had no authentic record of the death of any bird by poisoning.

It would seem from this that Mr. Thompson's statement in the early part of this article involved some error or exaggeration. Is it not possible that the "thousands of song-birds" mentioned were killed by some other agency?

Nevertheless, the Department of Agriculture informs us that it is striving to find a safer substitute for arsenical sprays.

STATUS OF THE TREATY WITH CANADA

John B. Burnham, President of the American Game Protective Association, who has been active in advancing the cause of international bird-protection, has furnished, in a private letter to the secretary of the National Association, a statement of the progress of this important matter which we are privileged to print. Mr. Burnham says:

"A few weeks ago, it seemed probable that conclusive and favorable action would be taken during the early fall. Now it is certain that no definite action will be taken by the British Government until after the European war is over, or at any rate until more favorable conditions arise.

"While we are marking time, however, there is no reason why we should be inactive. There is still a great deal of misapprehension in parts of Canada as to the

good to be accomplished by the passage of the treaty; and I trust that the opportunity will not be allowed to pass by members of Audubon Societies to impress upon their friends the great necessity for the earliest possible action by Canada in this matter. A summary of what has been accomplished may be of interest:

"On July 2, 1913, the United States Senate adopted the McLean resolution, authorizing the President to propose to other countries the negotiation of a convention for the protection and preservation of birds. The treaty was drawn in tentative form and submitted by the United States Department of State to the British Ambassador in March, 1914. With the approval of the British Foreign Office, the Ambassador forwarded the documents to the Dominion Government, which consulted the various Provincial Governments with regard to their attitude toward the proposed treaty.

"The matter was favorably received in most of the provinces, but not all had acted at the time that war was declared. If favorable action is taken by the provinces, it is assumed that the treaty will, in due course, be returned to the United States Secretary of State, with or without modifications, and that it will be ratified by the United States Senate, because at that time Senator McLean made the proposed treaty an issue, and the Senate was distinctly favorable toward it.

"Leading men in Canada, who under-

stand the situation, are heartily in favor of the proposed treaty. The North American Fish and Game Protective Association, at its meeting in Ottawa last winter, passed unanimously a very strong resolution in favor of the treaty. A little later the official Commission of Conservation of Canada also passed unanimously a strong resolution indorsing the treaty, and many of the strongest statesmen of Canada have approved of it.

"The treaty will put upon both countries a more vital obligation to see that their laws for the protection of migratory birds are effectually enforced. It will establish regulations prohibiting the illegal transportation of game from either country to the other. It will stop the shooting of wildfowl in the breeding-season. It will give a tremendous impetus to the protection of migratory insectivorous birds from the Arctic Ocean to the Rio Grande. The seasons, so far as most of the provinces of Canada are concerned, will not be materially changed. The United States, under the migratory-bird law, has been required to curtail seasons to a very much greater extent than is asked of Canada. The passage of the treaty will do more than anything else to assure the permanency of the principle of federal protection to migratory birds. Canada breeds most of the wildfowl which are shot in the United States, and should have the right to an equal voice in their protection against possible extermination by her southern neighbor."

NEW MEMBERS AND CONTRIBUTORS

Enrolled from July 1 to September 1, 1914.

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GENERAL NOTES

Watchfulness in Pennsylvania

The Audubon Plumage Law in Pennsylvania, enacted April 13, 1913, after a memorable campaign, forbade offering for sale, or having in possession for that purpose, after July 1, 1914, any feathers of wild birds belonging to any family of birds represented in the bird-life of the state. As the time approached when this prohibition was to go into effect, Dr. Joseph H. Kalbfus, Secretary of the State Board of Game Commissioners, sent to all dealers a circular explaining the law, and warning them against its violation. The effect of this kindly act, together with the vigilance of the officers concerned in its enforcement, has been most satisfactory. Dr. Kalbfus informs us that with few exceptions the law has been obeyed. "We have had some few prosecutions here and there," he says. "We are working up cases at this time against men who, we are informed, are determined to violate the law. I believe we are in position to say that but few egret plumes will be sold in Pennsylvania after this date."

Success to Blue Bird

The beautiful and artistic magazine *Blue Bird*, which is edited and published by our Ohio Field Agent, Dr. Eugene Swope, of Cincinnati, continues to grow rapidly in attractiveness and usefulness. While it covers, more or less particularly, all of the more engaging fields of natural history, it deals especially with the wild bird-life of the gardens and fields. The magazine is devoted more especially to the interests of the Junior Audubon Society members, yet adults, as well as children, take a keen interest in its pages. Dr. Swope is to be congratulated on a new acquisition to his editorial staff in the person of that entertaining and picturesque field ornithologist, Oscar E. Baynard, of Clearwater, Florida.

More power and success to the *Blue Bird*!

Connecticut Regaining Sea-birds

The marked increase this year of water-birds along the Connecticut shore of Long Island Sound can be accounted for in no other way than as a result of the protection afforded them in recent years by the National Association of Audubon Societies. Off Norwalk, Connecticut, for years an occasional Common Tern would be found in midsummer sitting on the oyster-stakes. This year Terns have appeared in great numbers, more than fifty in a flock being common; and Wilbur F. Smith reports that a large and prosperous new colony has bred on Goose Island, off Madison. Herring Gulls also were common off Norwalk during all the past summer. A flock of more than a hundred Laughing Gulls clustered about Smith's Ledge, near Stamford, Connecticut, on August 10 and 11, and among them were many immature birds. Petrels occurred in considerable numbers on Long Island Sound, twenty being counted in two hours; and one of them was Wilson's Petrel.

A Splendid Work

Many wonderfully interesting developments in the field of bird-study and bird-protection have occurred lately. One which gives promise of resulting in an immense amount of good is that originated by H. Rief, game warden at Seattle, Washington. Mr. Rief has begun the organization of the boys of that part of the state into "Junior Game Wardens." Company A now consists of one hundred bright, ambitious boys, varying in age from eight to twenty years. Each member of the company wears a badge, and is pledged to learn the names and habits of the wild birds, to serve as a scout to detect violators of the game-law, and see that they are brought to justice. The boys have been having some splendid field-trips of late, and each one carries a notebook for recording observations. "All have given their word that they will be

faithful workers in the Audubon Society cause," writes Mr. Rief. He says further:

"I am going to extend the organization over the entire city and take in every school. I shall try to organize a company in each school, so that action can be made quickly. The idea of these organizations is to work with the principals and teachers. If a boy in a school violates the law, that is, disturbs a nest or disturbs a bird, or interferes with a bird, the case is reported to me. I, in turn, hand the complaint to the captain in charge of that school. He lays the matter before his

Pierre Loti's Rebuke

In Paris, France, on March 9, 1914, the woman's paper, *La Vie Feminine*, gave its inauguration reception at the Galerie d'Excelsior, 88 Champs Elysées. The lecturer was the novelist Pierre Loti (Lieut. L. M. J. Viaud), who was asked to speak about women in Turkey. His opening remarks may be of interest to the Audubon Society:

"Before beginning my lecture," said



MR. RIEF AND HIS JUNIOR WARDENS ON A PATROL-BOAT

principal; the principal will call the delinquent before him. If the matter is grave, he will refer the delinquent to me. When he does, he places the delinquent in the custody of one or more of the junior wardens, and they bring him to my office. You can readily see that the humiliation connected with this will soon break the most ardent delinquent—at least, I have found it so. Some of the boys who were on the wrong side of the fence have mended their ways, and are now working with us."

The officers of Company A are E. R. Nelson, Captain; Erwin Brown, First Lieutenant; Charles Hoyt, Second Lieutenant; and Joseph R. Harris, Adjutant.

Dignities and responsibilities like these have an excellent influence on character.

the speaker, "will you, ladies, pardon a short digression, which has nothing to do with the subject in hand, but which is suggested to me, as I look down upon my feminine audience. If this reunion in front of me were composed of Orientals, an impression of quiet and charming mystery would reach me, a veritable rest to my eyes; the monotony of their sober costumes would be relieved, here and there, by brilliant reds, blues, and greens; but each costume would be draped in a uniform material, without the many small ornaments which I see you wear, and which make my eyes blink. The heads of the Eastern women would all be enveloped in veils, with archaic folds, showing only large eyes. The impression given by such an audience would be that of peace and harmony, whereas, looking at you from

this platform, I see a surging mass of feathers, which your hat-makers insist upon placing—some straight in front, others over one ear, then again a plume trails over the back of the head, in a weeping-willow style, giving the impression of unrest. I will end my digression by telling you something profoundly sad. Among the plumes on your hats I distinguish innumerable aigrettes, quantities of Birds-of-Paradise, and, as I turn my eyes away, I think of the ruthless massacres which bird-hunters are carrying on for your pleasure and vanity. Poor little winged world, inoffensive and charming, which in half a century, thanks to you, will be found nowhere! I recall some specimens, the most wonderful, which have already disappeared, with no possible return. What a sacrilege! What a crime! To have sent into oblivion a species of bird-life which no mortal can re-create in this world!

Ladies, I ask mercy for the birds of fair plumage. Believe me, all of you will be just as lovely, and appear less cruel, when you have discarded the covering of these little bodies, which you now wear on your hats."

On Guard in Central Texas

A report from H. Tullsen, President of the Central Texas Audubon Society, at Taylor, Texas, shows that the friends of birds are active there, not only in educational and other worthy directions, but in enforcing the law against the wanton destruction of bird-life. The especial villany in that region is the shooting of Nighthawks, one of the most innocent and useful of all our migratory birds.



A FLICKER AT ITS BATH

Scene in the garden of F. E. Barker, at Hamilton, Ohio

Several persons have been arrested and warned; and the society is spreading a knowledge of the federal and local laws, and announces that hereafter convictions will be followed by adequate punishment. Similar vigorous efforts should be made by local Audubon societies in all parts of the country.

Good Work at Bedford, New York

The Audubon Society of Bedford, New York, has printed and issued its first annual report, an admirable pamphlet showing a vigorous and intelligent activity. President Henry M. Howe is the writer; and he places first among the society's accomplishments the results obtained by the Committee on Nesting-boxes. A total of 704 nesting-boxes and 970 gourds (brought from the South by the chairman, William G. Borland) were made and sold to more than forty local buyers. In many cases, the same person has set out both shingle-boxes and gourds side by side, so that evidence will soon be obtained as to which class is the more attractive and useful.

Of fundamental importance is the work of the Membership Committee, under the chairmanship of Mrs. Marshall P. Slade, to which the society owes its having a membership of 175, and 63 junior members, total 238. The Committee on Illegal Shooting, Hall B. Waring chairman, has taken active and efficient steps to prevent illegal shooting, and the carrying of firearms, and it has been well supported by the police. Thanks to the Lecture Committee, under the guidance of Mrs. James S. Day, and to Mr. Borland, three formal lectures on birds have been given, one by T. Gilbert Pearson, Secretary of

the National Association; one by Dr. Arthur P. Allen, of Cornell University; and one by Edward H. Forbush; all very well attended. L. C. Remsen, of Mount Kisco, gave an informal talk at his house, illustrated by his valuable collection of native birds; the late Dr. Campbell spoke to the school children at Mount Kisco; and Mrs. Henry Marion Howe gave two informal talks on bird-protection. The Library Committee, Mrs. J. S. Penman, chairman, has stimulated the local libraries toward buying books on birds, and bringing them to the attention of the reading public; has placed in the libraries posters urging the putting up of bird-homes, and has distributed leaflets on the winter-feeding of birds. Charles Haines, representing this society, has visited Albany, and there urged on the legislature improvements needed in the statutes in the interest of birds. He has also given two well-attended lectures on birds, one at Bedford Hills and one at Mount Kisco. Miss Marion P. Cuyler has continued her valuable work on birds with the children of Mount Kisco. An effective cat-trap has been devised, which catches cats without injuring them, thus avoiding natural objections to the use of traps. Wild cats, when caught, have been shot.

It is believed that in these and other ways, effective steps tending to increase the bird-population have been taken. The suppression of illegal shooting, the wide use of gourds and nesting-boxes, feeding-boxes, and baths, and the efforts to avoid frightening the birds away, have certainly not only increased the number of Bedford-hatched birds that survive, but also made Bedford a much more attractive place for birds, and a far less attractive one for insect pests.



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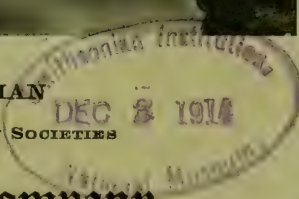
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Bird-Lore

November - December, 1914

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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XVI

NOVEMBER—DECEMBER, 1914

No. 6

Bird Life in Southern Illinois

I. Bird Haven*

By ROBERT RIDGWAY

With photographs by the Author



THE MISTRESS OF BIRD
HAVEN

IN October, 1906, the property which Mrs. Ridgway and I have named 'Bird Haven' was purchased in fulfilment of a long-cherished desire to possess a home in the country, where the pleasures of country life could be enjoyed to the fullest extent and opportunities afforded, close at hand, for the study of out-of-doors natural history, in a region not only affording rich material but also endeared to the writer by memories of a happy boyhood.

The site finally chosen was selected only after careful examination of practically the entire county. The greater part of a month was spent by us in our search and many likely spots examined; but, while other places were preferable in one respect or another, none of them combined so many of the essential requirements, as nearness to town, convenience of access, diversity of surface, and variety of tree-growth—for it was our purpose to establish, on a small scale, a preserve for our native trees and other flora. Other spots possessing all these advantages were, necessarily, passed by; some were of too large an acreage for our means, while others were, for one reason or another, unpurchasable. The chosen spot, while small in area, seemed specially adapted to our needs, because on this limited space grew a far larger number of native trees than I have ever found on an equal acreage; there was water 'in' abundance, there were both hills and lowlands, and birds seemed plentiful. The

*The first of three articles.

only disadvantage apparent at the time was the circumstance that our eight acres were separated from the main road by a ten-acre tract of woodland; but this was minimized by the generosity of the owner, who gave us the right of way for a road across his land. Two years later this ten-acre tract was added, by purchase, to Bird Haven; so that now eighteen acres are included within its boundaries.

As stated before, only one disadvantage in the site was apparent at first; but, with better knowledge gained from experience, two additional ones developed. One of them was so serious that, as told later on, we have been obliged to give up all hope of residing there. The other pertains to the larger stream which flows through the property. This at first seemed truly "a thing of beauty and a joy forever," an illusion effectually dispelled when the heavy rains came, and we were amazed at the volume of water which came down the valley, spreading over the whole extent of the lowlands, and bringing with it drift in the form of logs, stumps, and everything floatable. Flood-gates at



NESTING-BOXES FOR BIRDS: WOODPECKER HOLES IN DEAD LIMBS OF OLD FRUIT TREES, CUT OFF IN TRIMMING TREES

(After photograph was made, these were wired fast to trees and all have been occupied each year by Chickadees, Tufted Titmice, Great Crested Flycatchers, Downy Woodpeckers Bluebirds, etc.)

both places where the boundary fence crosses the creek became a necessity, and the maintaining of these in effective condition is a serious problem. However, we have passed many happy and profitable days on Bird Haven, and, while we no longer live there, all the improvements remain, and we make occasional visits there.

As previously stated, the topography of Bird Haven is varied. The only really level land is comprised in the 'bottoms' of the two streams which intersect it. The larger of these is known as the East Fork, a tributary of Fox River. This is a stream having, on our property, an average width of about twenty-two feet, and, except during the drier parts of the year, when portions become dried up, permanently supplied with water, especially our part, in the greater extent of which a depth of at least three feet is maintained even during periods of severe drought, being fed by springs which open beneath the surface. The other stream flows across the western part of Bird Haven, at right angles with the larger one, into which it flows when in flood; but, except in winter and during rains at other times, it is for the most part dry, though, owing to its narrowness and the deeply cut channel, this 'run' (as such streams are called locally) remains moist, with here and there a little pool, in which birds can bathe and drink.



A PORTION OF THE CREEK ON BIRD HAVEN—THE LOWER FLOOD-GATES

From the level bottoms of these streams rise low hills, those fronting the main stream rising steeply, with a broad, and for the greater part, cleared bottom (now converted into meadow) intervening between the hills and the creek. But on the west side, where the bottoms of the 'run' are densely covered with the most luxuriant growth possible of blue-grass, they slope more gently, both sides having the continuity of their slopes broken by occasional shallow, but not rocky, ravines, which drain the uplands, the general level of which is about thirty-six feet above the mean level of the creek.

Approximately half the area of Bird Haven is wooded, mostly with second-growth trees (the land having all been cultivated some forty to fifty years ago), though a very few trees of the original forest, which was very heavy, consisting largely of splendid white oaks and hickories* remain. Owing to diversity of surface and central geographic position, the flora of Bird Haven is very rich. This is especially true of the tree-growth, which comprises more than fifty species, nearly all of which grew on the original eight acres. There are eleven species of oaks (exactly as many as grow in the whole of New England!), seven hickories, three ashes, two maples, two elms, two crab-apples, two plums, two walnuts (the black walnut and the butternut), and at least two hawthorns; while of genera represented by a single species each there are per-

*This information I got from the man who sawed the timber and the one who cultivated the ground; also from the size of the few old stumps that remain.

simmon, tulip tree, wild cherry, red-bud, flowering dogwood, black gum (tupelo), honey locust, red cedar, cottonwood, river birch, hackberry (*Cellis crassifolia*), mulberry, pawpaw, sassafras, buttonwood (sycamore), wahoo or burning bush, wafer-ash or hop-tree, black willow, black haw, and prickly ash. Besides these native trees, all growing indigenously on the place, three naturalized species have, unaided by man, established themselves, these being the osage orange, the southern catalpa*, and the white or Chinese mulberry. The shrubs of Bird Haven include false indigo (*Amorpha fruticosa*), bladder-nut, button-bush, New Jersey tea, hazel, wild hydrangea, two hypericums (*H. prolificum* and *H. densiflorum*), elder, smooth sumac, spice-bush, pasture rose, glossy rose, sweetbrier (which in this part of the country is so common and widespread that one would never suspect it is not a native), prairie rose (in great abundance, many having been taken up and planted along the fence-lines, where they make a magnificent flowering hedge in season), blackberries, dewberries, black raspberry, and coral-berry or Indian currant, the last in dense masses along the creek banks and in other places. Of woody climbers there are trumpet-flower (too abundant and a great nuisance—ours are all the scarlet- or red-flowered form), moonseed, Virginia creeper, at least three grapes (*Vitis cinerea*, *V. vulpina*, and *V. æstivalis*), at least two greenbriers (*Smilax hispida* and *S. pseudo-china*), poison ivy, and a new clematis (related to *C. viorna*) recently described by Mr. Paul C. Standley, of the U. S. National Museum, from Bird Haven specimens. Herbaceous climbers include the ground-nut (*Apios tuberosa*), yellow passion-flower, wild yam, herbaceous smilax of two species, two scandent polygonums, several morning-glories (*Ipomæa pandurata*, *I. hederacea*, and *Convolvulus*, species), and several climbing plants of the pea or bean family.

For many years before its purchase by us, the land had been constantly pastured, and consequently there was little chance for terrestrial plants to grow; only blue-grass, and this cropped short, interspersed with clumps of boneset, ironweed, milkweed, and other kinds of weeds. Since the exclusion of stock, however, the native herbaceous flora has reestablished itself, and the rapidity with which this occurred was truly amazing. The list of herbaceous plants which have sprung into existence, as if by magic, is far too great to be presented in full, but a few of the more attractive or striking species may be mentioned. The spring beauty (here called 'daisy'!) is perhaps the most abundant plant, and our first glimpse of Bird Haven, on April 17, 1909, when,

*The native catalpa (*C. speciosa*) has been practically exterminated, in the wild state, in the vicinity of Olney. Even in cultivation, the southern species (*C. catalpa*), although in every respect distinctly inferior, is much more common, and has become thoroughly naturalized. The single catalpa found growing on Bird Haven when the place was purchased is a *C. catalpa*, the seed having blown to the spot where it germinated, many years ago, from some cultivated or roadside tree. At the present time, there are many fine examples of *C. speciosa* on Bird Haven, planted by me in 1907, and already larger than trees in a grove of *C. catalpa* on the adjoining farm, which were planted more than twenty years ago.

from a distance, the hills seemed covered with a light snowfall, is yet fresh in our memories. On the lower grounds grow, very thickly in places, blue and white violets, purplish white and yellow erythroniums, Dutchman's breeches, bloodroot, and dwarf larkspur, with two wild 'flags' (*Iris hexagona* and *I. versicolor*), the fragrant lizard's tail, and many other semi-aquatic species in the wetter spots. On the hills, the most abundant spring flowers (next to the spring beauty) are the blue phlox (*P. divaricata*), short-stemmed spiderwort (*Tradescantia brevicaulis*, decidedly a finer plant than *T. virginica*, its relatively large flower varying from intense violet to pale mauve, rose-pink, magenta,



THE MEADOW JUST AFTER MOWING

(The creek hidden by trees and shrubs extending across middle distance)

rhodamine purple or, occasionally, almost tyrian purple—a range of color very unusual among wild plants but a characteristic feature of this); other plants of more or less striking appearance being the May apple (*Podophyllum*) *Trillium recurvatum*, Indian turnip or Jack-in-the-pulpit, and its more conspicuous (as well as more abundant) relative, the dragon-root (*Arisæma dracontium*), and the stately columbo (*Frasera carolinensis*). In summer there are black-eyed Susans (*Rudbeckia*), monardas, and other flowers, and in autumn a considerable variety of goldenrods, asters, sunflowers, and other compositæ, and, in moister or more shaded spots, the blue lobelia, the cardinal flower, as the purple-flowered turtle head (*Chelone obliqua*).

The native flora has, since our ownership of the place, been greatly augmented by the planting of many trees, shrubs, and vines, chiefly those of a

specially ornamental character or else affording, in their fruit, food for the birds. Of this, however, there is little need, the place being already supplied with really more than can be used, in the pokeberries, wild grapes, poison-ivy berries, and seeds of numerous compositæ (especially the horseweed, *Ambrosia trifida*, the favorite winter food of purple finches).

With all these manifest attractions, abundance of bird-life would, naturally, be expected; but, for reasons at present beyond my control, such unfortunately, is not the case. Birds are fairly well represented, it is true, but they have too many enemies to contend with, to increase as they should. Chief among



THE COTTAGE ON BIRD HAVEN
(From West side)

these are house cats which have run wild, and the pilot black snake (*Coluber obsoletus*), here called 'chicken-snake.' I am not sure which of these pests should take first rank as a bird-destroyer, but am inclined to give the latter that distinction, for it is without question an inveterate enemy of bird-life, swallowing old, young, and eggs alike, and in its search for feathered victims displaying a craftiness and persistence certainly not excelled by the cat itself. Many times have I watched this snake, unfortunately our most abundant reptile, crawling about in large trees, making a systematic search for birds' nests, taking one branch at a time and exploring every hole and likely place. The most expert climber among all our serpents, it is essentially an aboreal species, and ascends to the very tops of the largest trees with the greatest ease. An illustration of the craftiness of this serpent is afforded in the following case:

A pair of Phœbes built their nest underneath the projecting eaves of the cottage at Bird Haven. The young were almost ready to leave the nest, when one of these snakes, having observed them, crawled out along a projecting horizontal limb of a nearby oak tree, dropped to the roof of the cottage, crawled to the edge, and, reaching over seized and devoured all the young birds. Needless to say the culprit was dispatched forthwith. On another occasion, when some visitors came to Bird Haven, they were shown a Field Sparrow's nest containing young, within fifty feet of the cottage; returning, not ten min-



A BIT OF BIRD HAVEN.—THE THRASHER AND CARDINAL THICKET
(Prickly Ash)

utes later, for another inspection, the nest was found empty. A brief search of the immediate vicinity revealed the robber in the person of one of these snakes. Many a nest, indeed, have I watched with interest that was at last found empty, and, although the direct evidence was wanting, there can be little doubt that in most cases at least a 'chicken snake' was the cause. This reptile grows to a large size, often exceeding six feet in length, and unfortunately is perhaps the most abundant of all our snakes.

Third in importance among the causes destructive to bird-life on Bird Haven, are trespassing hunters and boys. 'Unclimbable' fences and locked gates are no protection, and numerous signs forbidding trespass, displayed in the most conspicuous positions, are, apparently, looked upon as merely put up for ornament! For example, it is ordinarily supposed that school teachers are

able to read; nevertheless, some of them either cannot, or else their moral sense is so low that they are unable to possess any conception of that essential element of civilization—respect for the rights of ownership. One teacher, a young man who at least looked to be intelligent and honest, deliberately entered and shot a gray squirrel within fifty feet of one of the signs forbidding trespass; another (a young woman, I am sorry to say) took her entire school, in several automobiles, and with her scholars, climbed over the locked (and barb-wire protected) gate, and had a picnic on the grounds. Surely a fine example for her pupils!

Under such circumstances, it is not strange that birds should be less numerous than would be expected from the natural advantages of the place. That birds are by no means really scarce, however, on Bird Haven, may be seen by the list of species that have been positively ascertained to breed there, and by the fact that during a little over one month in spring (April 17 to May 21, 1909) Mrs. Ridgway and I counted one hundred and seventeen species* on the eight acres then representing the area of the property, a considerable number seen just outside the boundaries not being included. We have been so little on Bird Haven, especially within the last three years, that our knowledge of the bird-life of the place is, necessarily, imperfect. Indeed, while living there, my time was so fully occupied with the planning and superintendence of improvements, planting, and other work, that there was practically no time for anything else, and what knowledge was gained as to birds was mainly obtained by more or less casual observation. The species observed were, however, noted, and such memoranda made as time could be spared for.

Altogether, the number of species observed on Bird Haven (including a few that were seen flying over and others positively identified by voice or other means) is one hundred and thirty-four, of which the more notable are the following:

Mississippi Kite. One pair seen soaring overhead, during the summer of 1910. (Exact date apparently not recorded, but it must have been prior to August, as we left there July 28. These were the very last individuals of the species, formerly common and at times very numerous in this portion of the country, that I have seen.)

Barn Owl. Not seen, but its peculiar cry frequently heard at night.

Long-eared Owl. Not seen, but its feathers found.

Chuck-will's-widow. Not seen, but the easily recognized call-notes of one individual heard regularly nearly every evening.

White-crowned Sparrow. Very abundant and tuneful during the spring migration, early in May.

Montana Junco. A common winter resident, in the proportion of at least one to ten of the Slate-colored Junco. The two are very easily distinguished in life, the pinkish sides and lighter gray head of *Junco montanus* being con-

*May 14-16, 1908, seventy-eight species were noted during the two days.



PORTION OF BIRD HAVEN NEAR COUNTRY ROAD, SHOWING ROADWAY TO COTTAGE, AND RUSTIC BRIDGE

spicuous at a considerable distance, and were often seen feeding together from the cottage windows.

Blue Grosbeak. Nested once only on Bird Haven, and not seen there (or elsewhere) since. A family of full-grown young, with their parents, were seen in the dense growth of tall blackberries and horseweeds in the creek bottom, but I have mislaid the memorandum showing date. I think, however, it was some time toward the end of July, 1910.

Bell's Vireo. Its peculiar song occasionally heard in the thickets along the creek.

Kirtland's Warbler. A beautiful adult male, positively identified at close quarters, on the morning of May 3, 1908. I was on my way to work, and had just entered the woods when the bird attracted my attention. After making the identification certain, I returned to the cottage for my gun; but in the meantime he departed, and could not be found again.

The list of birds ascertained to breed within the limits of Bird Haven is also incomplete. I had no time to hunt for birds' nests, except on very rare occasions, and some species undoubtedly breed there that are not included in the following list:

- | | |
|--------------------------------|------------------------------|
| 1. Green Heron. | 28. Field Sparrow. |
| 2. Bob-white. | 29. Bachman's Sparrow. |
| 3. Mourning Dove. | 30. Towhee. |
| 4. Red-shouldered Hawk. | 31. Cardinal. |
| 5. Sparrow Hawk. | 32. Blue Grosbeak. |
| 6. Barred Owl. | 33. Indigo Bird. |
| 7. Yellow-billed Cuckoo. | 34. Scarlet Tanager. |
| 8. Black-billed Cuckoo. | 35. Summer Tanager. |
| 9. Southern Hairy Woodpecker. | 36. Red-eyed Vireo. |
| 10. Southern Downy Woodpecker. | 37. Yellow-throated Vireo. |
| 11. Red-headed Woodpecker. | 38. White-eyed Vireo. |
| 12. Red-bellied Woodpecker. | 39. Louisiana Water-Thrush. |
| 13. Flicker. | 40. Kentucky Warbler. |
| 14. Whip-poor-will. | 41. Maryland Yellow-throat. |
| 15. Kingbird. | 42. Yellow-breasted Chat. |
| 16. Crested Flycatcher. | 43. Redstart. |
| 17. Phoebe. | 44. Catbird. |
| 18. Wood Pewee. | 45. Brown Thrasher. |
| 19. Acadian Flycatcher. | 46. Carolina Wren. |
| 20. Blue Jay. | 47. Western House Wren. |
| 21. Crow. | 48. White-breasted Nuthatch. |
| 22. Cowbird. | 49. Tufted Titmouse. |
| 23. Red-winged Blackbird. | 50. Carolina Chickadee. |
| 24. Southern Meadowlark. | 51. Blue-gray Gnatcatcher. |
| 25. Orchard Oriole. | 52. Southern Robin. |
| 26. Baltimore Oriole. | 53. Bluebird. |
| 27. Chipping Sparrow. | |

The following additional species breed in the immediate vicinity, most of them on the farm of which Bird Haven was formerly a part, and therefore there

is reason for supposing that some of them should be included in the preceding list:

- | | |
|-------------------------------|------------------------------|
| 1. Woodcock. | 14. Lark Sparrow. |
| 2. Spotted Sandpiper. | 15. Dickcissel. |
| 3. Killdeer. | 16. Purple Martin. |
| *4. Cooper's Hawk. | 17. Barn Swallow. |
| *5. Red-tailed Hawk. | 18. Cedar Waxwing. |
| *6. Great Horned Owl. | 19. Warbling Vireo. |
| *7. Screech Owl. | 20. Bell's Vireo. |
| 8. Chimney Swift. | 21. Black-and-white Warbler. |
| 9. Ruby-throated Hummingbird. | 22. Yellow Warbler. |
| 10. Alder Flycatcher. | 23. Cerulean Warbler. |
| 11. Bronzed Grackle. | 24. Mockingbird. |
| 12. Goldfinch. | 25. Bewick's Wren. |
| 13. Grasshopper Sparrow. | 26. Wood Thrush. |

The four species distinguished by an asterisk breed in the sixty-acre tract of woodland bordering Bird Haven along the south side, and these, together with all the rest, excepting only the Chimney Swift, Purple Martin, and Barn Swallow, are among the 'possibilities.'

The great preponderance of land birds in the Bird Haven list is the natural result of absence of any considerable body of water or marshy tracts. The only swimmer seen there in all the time that observations were made was a solitary duck, probably a Blue-winged Teal, though it could not be positively identified. Of waders only the following have been noted:

- | | |
|---|---------------------------------------|
| 1. Great Blue Heron. Only seen flying over, but its tracks frequently found in the mud along margin of the creek. | 4. Woodcock. |
| 2. Green Heron. | 5. Solitary Sandpiper. |
| 3. Black-crowned Night Heron. | 6. Spotted Sandpiper. |
| | 7. Upland Plover. (Flying over only.) |
| | 8. Killdeer. |

During the summer of 1910* we remained in the vicinity late enough (until July 28) to discover, for the first time, that Bird Haven would be impossible as a place of residence during the hot season. A sixty-acre tract of woodland stretching along the entire length of the south side, and much beyond, intercepted every bit of the cooling breeze which, in summer, here blows only (with rare exceptions) from the south. We could see the tree-tops swaying from the force of the wind, but beneath not a breath of air stirred, and it was often impossible to remain inside the cottage during the hotter hours of the day. The trouble being irremediable (the land causing the trouble being held at a prohibitive price), it became necessary to look about for a more suitable place for our residence during the warmer months. The new place

*During the occasion referred to, we did not live on Bird Haven, the cottage there being too small for our family, which, for the time being, was considerably augmented by guests, our place of residence being the dwelling on the adjoining farm,

was purchased in October, 1910, since which time Bird Haven has been practically neglected; though as a bird refuge it exists in intention, if not in fact. The place is still 'taboo' to trespassers, at least it is so plainly stated on the the warning signs still posted in conspicuous places; the barbed wires strung on horizontal cleats spiked to the tops of the posts and projecting inside are still in place, and the gate locked. Only an occasional school-teacher with her scholars, a picnic party, gunners, nut-hunters, bird-nesting boys, and other odds and ends of humanity* have access (surreptitiously, of course) to its sacred precincts.

The story of Larchmound, the new place, will be told in the next chapter. The third, and concluding article in the series will treat of the changes which have occurred in southern Illinois bird-life during the past half century.

*The boy who wants to cut a nice young cedar for a Christmas tree was nearly forgotten.



KINGFISHER WITH SMALL SUCKER
Photographed by Arthur A. Allen, Ithaca, N. Y.

Impressions of the Voices of Tropical Birds

By LOUIS AGASSIZ FUERTES

Illustrated by the Author

SIXTH PAPER—PARROTS, GUANS, AND PIGEONS; THE VOICES OF A TROPICAL MARSH

WHEN one meets with wild Parrots for the first time, he gets, undiluted, the pure breath of the tropics. And when, after an acquaintance with the Parrakeets and Parrotlets, the larger and more thrilling kinds appear, the sensations are even richer. About Cali, and indeed most of the other Southern American towns and villages, the little green and sky-blue Parrotlets fill the place House Sparrows occupy with us, nesting in the bamboo ridgepoles of the houses, and adopting a familiar attitude toward man and his works. The native children almost universally tame them, and in the patio of the Cali hotel seventeen of them lived in perfect familiarity among the roses and flowering vines. Their chirping and twittering reminded me of nothing more than the noises made by Sparrows; though the fact that they were indigenous, coupled with their confiding friendliness and beautiful colors, removed the prejudice that the reminder might otherwise have engendered.

Wild Parrots make the same raucous noises that tame ones do, and a feeding flock, unsuspecting of man's proximity, is constantly in low, chuckling conversation. But many and many a time I have heard them up the trail, and, cautiously approaching, have become aware that I was observed, when all sound and motion ceased while I was still some distance from their feeding-tree. With all their scarlet and saffron trimmings, the *Amazona* Parrots, in my experience, take an easy palm over all others in the gentle art of ceasing to be where you know they are! I think we all had the experience of searching till our eyes ached, where we knew Parrots were working, without being able to discern a single bird, even in the comparatively open leafage along the trails. Suddenly, without the slightest warning, as the entire flock took simultaneous alarm, the innocent air would be rent with the hellish screeching of two hundred fiendish birds, and gorgeous with the flashing scarlet and blue and gold of noisy wings, as these capricious and thrilling birds would leave for another part of the forest. The tree would literally explode Parrots!

After some experience with them, we came to distinguish the three Mexican *Amazonas* by their cries, when they were too far away to tell by sight. *A. oratrix*, the 'Double Yellow-head' of fanciers, cried quite plainly "Cut it out, cut it out," while *A. viridiginialis* called "Poll-Poll-Parrot, Poll-Poll-Parrot," and *A. autumnalis*, from southern Vera Cruz, had a sufficiently distinct screech to immediately stamp it as something new, although I made no transcription of its yell.

Conures all make regular Parrot noises, though shriller and 'lighter' than those of the larger kinds. But the 'real noise' in Parrotedom is the great, gor-



MACAWS, PARROTS, AND PARRAKEETS

geous and ear-splitting Macaw. Along the lower Magdalena River, the red-and-blue, and the blue-and-yellow Macaws were both quite common, and it is hard to say whether their greatest attack was on our eyes or our ears! Their heavy, rasping yell was clearly audible above the churning racket of the engines, even when the birds were some distance away in the forest. We were frequently apprised of their flights, high, high over the valley, as they passed from one great Andean chain to another, perhaps three thousand feet above us, by the penetrating, though distance-mellowed cries that filtered down to us from the scarcely discernible line. When heard near at hand, there is a heavy, hammering quality in a Macaw's scream that makes it the most deafening noise that I have ever heard from a bird, while their fiery beauty affords the greatest sensation a naturalist gets in their country. Not only are their exposed surfaces brilliant, but their wing- and tail-linings are as gorgeous. I shall never forget a flock of blue-and-yellow Macaws we passed one evening just before sunset, as we were descending the Magdalena. We were between them and the low sun. They were near, and about level with our eyes, relieving against the velvety green of the forest wall directly where our shadows fell. The astonishing glory of their turquoise upper surfaces, alternating, as they flew, with intense cadmium yellow as the sun got under their wings, kindled a flashing riot of color that made us gasp.

So far as I know, Parrots all pair for life, and every large flock we saw, whether of Macaws, Parrots or Parrakeets, was made up of pairs, each bird of which bore the same relation to the other all through the flock. They looked as if made with a paired stencil, or seen through a double-refracting glass. Invariably, if one bird was lost out of a passing flock, another would soon drop out, circle and come back to see what had happened to its mate. If, rarely, there were unpaired birds in a flock, they were usually apart from the main body, and conspicuously 'out of it.' In flight, Parrots present a singular resemblance to Ducks, particularly from ahead or behind. Flying 'across the quarter,' their heavy blunt heads are of course unmistakable.

We were kept constantly interested in the varied voices of the Doves and Pigeons. The gentle little Ground-doves, hardly bigger than Sparrows, give a single, soft, questioning 'coo,' invariably with a rising inflection. I could distinguish no material variation in their calls in Florida, Yucatan, or South America, and even the Rufous species presented no differences appreciable to my ear. The Ground-pigeons of the genus *Geotrygon* all have gentle, velvety voices which, heard in the damp gloom of the cloud-forest, impart something of the mystery and romance of the Tinamou's tremulous plaint. They have the same uncanny way of gliding silently into view and melting away, and when, rarely, they fall into our hands, their subdued but rich beauty compels an admiration that does not dim with repetition.

But not all Pigeons have these soft owl-like voices. *Columba speciosa* has a harsh, raw-voiced single 'toot,' audible at a considerable distance. (C.

bogotensis) in the eastern Andes, in addition to the regular Pigeon clucks and cooing, has a loud, rough call, with a strong roll or 'burr' in it, suggesting a 'Klaxon' automobile horn. The White-winged Doves of *Melopelia* are among the noisiest of the Pigeons. Indeed, a flock calling from a feeding-tree, with their loud rollicking 'Hoo-too-coo-roooo,—Hoo-too-coo-roooo,' reiterated interminably, recalls a group of victory-crazed undergraduates 'rooting' for their football team. I found that I could quite closely imitate this and several other Pigeon-calls by whistling through my hands.



BOUCIER'S FOREST DOVE

I heard only one of the big Guans, of the genus *Crax*. What I took to be the fine black Curassow, at Buena Vista, sat one evening for half an hour before sunset in the dense top of a great forest tree, and gave his exciting cry, at intervals of half a minute, until the sun was well down and the hurrying dusk began to deepen. I cautiously crept nearer and nearer, and finally gazed up from directly below. Here I searched until my neck ached, but though the cries came regularly and I constantly changed my position, the bird was so well hidden that I never saw him, and at last I left him there, to hurry out of the deepening gloom of the forest before it should get fully dark.

As it was, I had to 'foot-feel' my way for the last part of the trail, as night caught me before I reached the clearing. This call is hard to describe. It was not at all 'gobbly,' like a Turkey's voice, but was a loud siren call, which the natives interpret by their name for the bird, 'Burria,'—with the r's strongly trilled. It rolls up a full octave, sustains a second, and rolls down again. I think it would carry across the shadowed valleys in the still sunset forests for a mile at least, and is fully as loud as any answer a strong-lunged boy could yell back.

The little Guans of the genus *Ortalis*, the Chachalacas, have also a fine sensation saved up for the eager naturalist who has not heard them before.



SPURWINGS, JACANAS, AND CRESTED SCREAMER

The male, with his elongated and convoluted windpipe, has the louder and rougher cry, which, by virtue of the longer instrument to trumpet through is an exact octave lower than that of his normally equipped mate. *O. vetula*, from Mexico, says quite plainly 'Cha-cha-lac'-ca. Cha-cha-lac'-ca,' or, as the Mexicans more phonetically spell it, 'Guacharra'ca.' It has a very human quality of voice, and sounds nearly as loud at a quarter of a mile as it does at a hundred yards. The Colombian species heard in the Magdalena Valley seemed, to my ear, to screech 'aqua-dock.' The various members of a calling flock keep time, roughly, according to sex. They are apt to call from up on the mountain-sides or in ravines, when the rebounding echoes complicate and augment the chorus immensely.

Another noteworthy voice is the rolling cry of *Aramides*, the big rusty-colored Wood-rail. As dusk was falling around me on a forested mountain-side, while working my way out to the trail, I was suddenly congealed by a loud, rolling cry, hastily repeated three or four times. It sounded in front of me, behind me, over me, and under me! I began to think it was all around me. A loud hoot, then a rising, rolling trill— 'Oot-roo-ee-e-e-e- oot-roo-ee-e-e-.' I found I could do it by 'pigeon-tooting' through my hands, so that the bird came quite near, and thrilled me deeply. But it was too dark, and I knew not where to look for it. After a few responses it slipped away, still a mystery; but when I reached camp and imitated it for Mr. Cherrie, he at once recognized it as *Aramides*; and this diagnosis is his, not mine, for I never had another opportunity to identify it.

Among the lasting impressions that I have brought out of the tropics, certainly one of the most vivid is of the great, sultry, odorous and soundful marshes of the Magdalena and Cauca Valleys. These treacherous reaches have a fascination, and exert a call upon the novice-naturalist that is indeed likely to get him into trouble. Everything that charms the senses in a northern water-field is here multiplied. Plant-life is riot, insects accordingly swarm, and many species of birds avail themselves of the easy food they furnish. The allurements of a fragrant, shimmering sheet of placid water, with beds of floating plants made gay with the delicately lovely Jacanas, fighting their innocent battles, and displaying their lemon butterfly wings; the dignified Spur-winged Plover that trot on the margins, or fly in noisy flocks, like Dutch Lapwings, low over the surrounding pasture-lands; perhaps a bare snag, far out in the deep marsh, all in glowing blossom with Roseate Spoonbills and Snowy Herons; the loud clatter of the giant Kingfisher and the dry rasping of his tiny 'Texas' cousin; statuesque Screamers, posing on an exposed bar; the squealing whistles of the Tree-ducks dabbling and sunning themselves at the edge of the hyacinths beds;—all these and a hundred other charms lure him deeper and deeper into the marsh or into the lush reeds and papyrus beds that form some of their margins. I shall not soon forget an hour spent in retrieving an Everglade Kite in the great marsh at Calamar. Here the one pervasive sound was the constant, irritating hum of the myriads of ravenous mosquitos. Things were not helped by the discovery that I was soon on a false bottom, made only of the suspended roots of the vegetation that rose ten feet above me, so that I went through, and had to go the rest of the way on my knees, up to my armpits in tepid water. As I had a gun and a glass to keep dry, this was no joke, and I think that was the most miserable hour I ever went through. At the end I was absolutely spent, and could only crawl out and lie down—easy meat for the mosquitos—for another hour. But it had its recompenses. Into the willow-like shrubbery over me came the beautiful little Yellow-headed Blackbird of the tropics and sang his orchard-oriole song. Nearby, Great-tailed Grackles squealed, piped and pointed their bills aloft in their

nuptial attitudinizing. The red-breasted 'Meadowlark,' *Leistes*, also came to close quarters, though it did not sing, and I watched the lovely and delicate little black-and-white marsh Flycatchers almost at arm's length.

There is a creature in the South American forests which, though not a bird, ranks easily first as a maker of weird noises. I have read many descriptions of his performance, but was not in the least prepared for the reality when I actually heard it, nor did I even recognize it. This is the roaring of the so-called howling monkey. To my mind, howling is a sort of eerie, rising-and-falling noise, far different from the deep-voiced, business-like, bellowing roar that is the predominant feature of this little animal's performance. It is at least a hundred times more thunderous and terrible than would seem possible from a creature somewhat larger than a big tom-cat. I had heard them in the distance a number of times, but it was at Rio Frio, on the Cauca River, where our little stern-wheeler was taking wood, that I first got close to them



CRESTED CURASSOW

in 'action.' As I left the boat for a short walk in the virgin bottom-forest I heard howlers a little distance in. I knew they were small animals (our biggest male weighed seventeen pounds), and could do me no harm. Yet here I confess to a greater triumph of mind over matter than I have elsewhere ever been called on to effect, in order to overcome the fierce desire to be somewhere else. In spite of the intellectual certainty that it was perfectly safe, it took all my nerve, that first time, to move up under the tree whence came that courage-killing, menacing bellow. There were only four of them; an old male, a female and two half-grown young; probably a family. Yet the terrible noise,



RED HOWLER

that issued principally from the bearded and swollen throat of the old male, seemed, really, to make the atmosphere quake. As I stood below, he would rush down toward me, bellowing outrageously, and I thought it took some fortitude, at first, to stand by till he retreated again. The noise, as I analyzed it at the time, was a deep, throaty, bass roar, with something of the quality of grunting pigs, or the barking bellow of a bull alligator, or an Ostrich. Accompanying this major sound was a weird, crooning sort of wail, probably the contribution of the female or young, or both. The noise was fully as loud

as the full-throated roaring of lions, and that it has marvelous carrying power was frequently attested when we heard it from the far side of some of the great Andean valleys as we wound our tortuous way across the Central Cordillera. This is of course in no sense a bird-voice, yet it is by far the most striking sound in the American tropics, and I should feel that I had done the subject slight justice if I did not at least try to make it recognizable to those who may read these papers, and some day hear for themselves this astonishing sound.

In bringing to a close this series of impressions, it must not be thought that they cover the field of tropical bird music. They form, indeed, the merest nucleus on which to build.

On the Trail of the Evening Grosbeak

By ARTHUR A. ALLEN, Ithaca, N. Y.

With photographs by the Author

THIS is not a tale of the 'treacherous muskeg' and the 'long traverse.' No perilous adventures or rare discoveries in the nesting haunts of this fascinating bird will be recounted. We will not even penetrate into its breeding range. Instead, follow me along the highways of Ithaca, through its parks and cemeteries and into its thickets. Track with me these birds from feeding-ground to feeding-ground, learn their food, decoy them to feeding-stations, bring them to our own back door, and transform them from fleeting guests to daily companions.

The story begins February 17, 1914; at least for our purposes it does, though, personally, I believe it began many, many Grosbeak generations ago, when the first of the species wandered from the beaten paths of their migration in the west and started the habit of coming east. For they are creatures of habit, these Evening Grosbeaks, stolid, indifferent, lazy, almost stupid, and, as this story will show, having once discovered a satisfactory course of action or a good route to travel, they can never perceive another. And so every year, I believe, certain of these birds start on their easterly thoroughfares, traveling by easy stages, delaying where food is plentiful, and only during unusual years of starvation in the west reaching their highways in the east.

On this day, February 17, a flock of eleven birds was seen by Miss Bates in the trees behind her residence at the south side of the city and promptly reported. Somehow, an Evening Grosbeak always creates a furor among bird-lovers in the East; the news of their arrival was announced in the local papers, and early-morning bird trips were quite in vogue. A strange coincidence and a significant one it seemed, that on their last appearance in Ithaca they were first recorded at this same place, as though it were a way-station along their route of travel.

The next day they returned, and for several days thereafter were seen between eleven and one o'clock, sometimes staying for half an hour or more in the group of chokecherry trees back of the house. It was noticed that they were feeding on the seeds of the dried cherries which still clung to the branches, cracking them with their heavy bills; and it was then that the thought of finding a suitable food and thus encouraging them to remain, occurred to me. So I hastened to the spot with small pans and bags of feed—sorghum, millet, wheat, buckwheat, kaffir corn, cracked corn, and sunflower seed. The pans were wired in the trees where the Grosbeaks had been seen feeding, and filled with a mixture of the different seeds; for, as yet, I knew not their preference. The supply of dried cherries having become exhausted, other fruit-bearing branches were brought in and fastened near the pans. Everything promised well. Chickadees and Nuthatches found the pans

almost immediately and helped themselves to the corn and sunflower seeds, and House Sparrows flocked to the spot and scratched and fought. The Grosbeaks were still coming daily, so it was with great anticipation that I telephoned Miss Bates the following day to learn if they had found the pans. No, I was informed, for the first time, they had not been there. The next day the same answer, and thus it was for a week. I began to think I had started operations too late. Still a few more days passed before they returned, and by this time the Sparrows had devoured all the seed. This happened again and again before the Grosbeaks finally arrived ahead of the Sparrows, and then, to our dismay, they spurned the proffered food. They merely picked off the few remaining cherry seeds and disappeared. Obviously their tastes were too fastidious for this bill-of-fare.

It was several days before they favored us again, and this time, while they did not touch the seed in the pans, they discovered that on the ground which had been scratched out by the Sparrows and, without looking twice, dropped to the banquet with true avian appreciation. Tin pans invitingly suspended in trees, evidently do not spell *food* to Evening Grosbeaks. A hint to the wise is sufficient—meals were thereafter served on the ground. The Grosbeaks returned, stayed around for a couple of hours, and came back again the following morning at their accustomed hour, which, for the last few days, had been 6.30 A.M. Now for some photographs.

The next morning, gray dawn found me at the feeding-station with a camera. I arrived at thirty-two minutes after six, but the Grosbeaks, with their usual promptness, passed me on the way and arrived two minutes earlier. I concealed the camera near the spot and, in so doing, of necessity frightened them away; but expecting that they would soon return, I stretched a thread from the lens-shutter to one of the windows of the house and prepared to await their coming. Breakfast time came and went and office hours began, but still no Grosbeaks. I explained the mechanism of the string to an efficient proxy and went about less romantic labors; but I might have spared us both the trouble, for the Grosbeaks did not come back.

The following morning everything was in readiness before half after the hour, and I had not long to wait. I took out my watch—twenty-nine minutes and thirty seconds after six. If they were to be on time, they would have to arrive within thirty seconds. The words were scarcely spoken before a chorus of loud, strident notes announced them. Three males and eight females alighted in the trees over the camera. They discussed matters for a while like a steepleful of Sparrows, before deciding that it was time for breakfast. Two females flew down and arranged themselves before the camera; two more, and then the remaining females. More wary or less greedy, the males delayed; but I determined to wait, before pulling the thread, until at least one of them should get in front of the lens. Still they hesitated, and when they finally did drop to the ground, they were not in the plane of focus; only provokingly

near. Very slowly they edged toward the females. The thread tightened—it is a tense moment just before you snap the picture, like the suspense when the fish is nibbling and you are waiting for just the right response before jerking the line. In a moment I would have the coveted picture. The thread was



EVENING GROSBEAKS IN SUMACH

almost taut when, with excited chirping, all of the Grosbeaks flew into the trees, and a huge black cat bounded from behind a bush. Words fail me now, as then, to express my feelings. Imagine then, if you can, my state of mind the following morning, when exactly the same performance was repeated, except that this time it was a yellow cat. Black cats, yellow cats, and Mal-



THE EVENING GROSBEAKS AND THE FEEDING LOG

tese cats were all the same to me then, and I gave up hope of ever photographing the Grosbeaks.

But it is an ill wind that blows no good. If the Grosbeaks had been driven from their first-chosen feeding-ground, they must find another, and fortune smiled upon me once. The very next morning at dawn, the thicket below my own residence resounded with their notes, and within an hour two of the birds had found one of the several feeding-stations which, with fond hopes, I had established in the thicket when the birds were first reported. This station, while rather inaccessible, was within sight of the house. We put out enough sunflower seed to feed an army of Grosbeaks, having discovered by this time that they preferred these seeds to the others, and the next morning we were rewarded by having the whole flock feeding within sight of our own windows. There were no cats here, and as soon as the Grosbeaks had once formed the habit of coming to be fed it proved irresistible, and regularly as the clock struck they arrived every morning at half past six.

With them so close at hand, it was easy to study them and watch their changes with the progress of the season. At first they were wild and never remained after eight in the morning, but later, as other food became scarce, they grew tamer and remained all the morning and even into the afternoon.

A camera was concealed in a box near the feeding-log and several photographs of them taken; but it was a long distance from the house and the light was unsatisfactory. We wanted them nearer, if possible at the feeding-station in the yard, which though less than three hundred feet up the hill, and though always well supplied with seed, they had not found. Hoping to bring them up by gradual stages, we removed the food from the lower station and started another about fifty feet up the hill. The next morning they returned to the accustomed place, but there was no food for them. We thought they surely would scout around and find the new station; but not so, they simply deserted us. Thoroughly dismayed by our experiment, we quickly replaced the food at the lower station and were rewarded by having them back again the next morning. We now scattered seed all the way up the hill, making small piles at intervals of about fifty feet. This afforded a glorious time for the Sparrows, and they rejoiced at the tops of their shrill voices. We feared lest they would devour all the seed before the Grosbeaks could find the upper stations, but it worked another way. The Grosbeaks came to the lower station where there was but little seed, heard the Sparrows at the one above, and quickly joined them. From that they moved up to the next, and so on until, almost before we realized it, they were at the uppermost station, not twenty-five feet



UNTIL THE FIRST OF APRIL THEY FREQUENTLY FED TOGETHER ON THE LOG

from the house. Here was all the food they could eat, and they were never allowed to go hungry during the rest of their stay. From that time on we could watch them with the greatest facility, for they often perched in a maple tree within fifteen feet of the porch.

Between the first and the middle of April, the Juncos and Tree Sparrows left the feeding-station and the company of the Grosbeaks for their more

northern homes, and the Robins and Song Sparrows filled the vacant places. On the twenty-sixth of March, a lonely Cardinal, the first of his kind to visit Ithaca, wandered through the thicket. He came back many other days at intervals, and for a long time our highest ambition was to secure a photograph of the Grosbeaks and Cardinal together, and thus unite on one film opposite corners of the continent. Weeks passed before the opportunity came, with the Cardinal on the log and the Grosbeaks in the branches overhead. But the Cardinal was a nervous bird, and we knew that he would remain but a few seconds. The Grosbeaks still lingered in the trees. It seemed an endless moment until one male Grosbeak dropped to the point. The thread tightened, the



ONE OF THE MALES

shutter clicked. But as it did so, there was a blur of red and yellow on the log. The Cardinal, with crest and tail erect, wings raised and bill open, had darted at the Grosbeak and knocked him off with such speed and determination that the exposure of a fiftieth of a second recorded only confused outlines.

But other birds were more peace-loving. Flocks of House Sparrows with insolent curiosity surrounded the Grosbeaks, or mingled with them as they had from the very first. Song Sparrows and Whitethroats neither feared them nor attacked them, and Cowbirds seemed to enjoy their company.

Less can be said for the Grosbeaks; for after the first of April, they became very irritable and quarrelsome among themselves. No bird except the House Sparrow seems willing to feed without 'elbow-room,' and I suppose the cramped quarters due to our desire to have all the action take place in front

of our camera finally got on their nerves. At any rate, about this time they began to bill and clinch in quite a ferocious manner. At times they bounded up, clinching in mid-air and beating one another with their wings; but usually a more sedate grappling and tugging was sufficient to determine precedence. To all appearances, however, none of the birds were ever the worse for these brawls, and, away from the feeding-station they bore no malice toward each other.

The Sparrows likewise suffered from their irritability. Once, while we were watching them, one became too officious, and a Grosbeak with quiet precision reached over and pinched him viciously in the middle of the back. We thought



DODGING A VICIOUS THRUST

it would be the last of the Sparrow; but evidently the powerful bill did not close with murderous intent, for after giving vent to his feelings in a few indignant chirps, the Sparrow hopped back to his place beside the Grosbeak. After that, it was usually sufficient for any of the Grosbeaks merely to point its bill in the direction of the offender, to make him quite desirous of being elsewhere.

Their fighting, however, was the least of our concerns. Beginning about the last of March, they seemed to delight in sunning themselves on the leafless branches, now and then venting their feelings in silent yawns and stretching their wings and tails. At first we laid this entirely to their lazy natures; but as the season advanced their stretching became more noticeable, and they sought out the shady side of the larger branches or kept entirely to the ever-

greens. The blacks and yellows of the males became more intense; they began to show some interest in the females, chasing them up and down the thicket, until we feared that they were getting ready to leave. On the 17th of April, however, we were surprised to see one of the females breaking dead



AFTER THE FIRST OF APRIL THEY CEASED TO BE FRIENDLY TOWARD EACH OTHER

twigs from a nearby elm. We watched her closely to see where she would carry them, but unfortunately a male, arriving on the scene, so disconcerted her that she quickly dropped them. But this was not the only time that we saw females gathering nesting material, so we began to hope that we were inducing these distinguished visitors to nest here, an accomplishment well worth all our time and effort.

Three days later one of the males tried to sing, the first and only attempt that we heard and by no means a brilliant success, consisting of five or six low notes like the chirping of a gigantic English Sparrow. But it increased our hope that they had decided to stay. Nor were our expectations diminished when, toward the last of April, the flock began to break up. They no longer came in a body; single birds, pairs, or small groups fed together, and some of the females seemed to have moved on. But this did not alarm us, for we realized that if the males had selected their mates, the chances for about five of the females would be better further north. Moreover, they had ceased their stretching; they were tamer and would come to the log when we were only a few feet away. But by this time, the first of May, the numerous elms

had ripened their seed and the Grosbeaks were no longer so dependent on our supplies. Our first shock came on May 5, when one of the three remaining females failed to appear during the entire day. The next day all three males departed, and by the tenth of the month there was but one female left. She, faithful bird, staid until the fourteenth, when lonesomeness overcame her and she too winged her way to the north.

It was nearly three months from the time of their arrival. We were sorry they had not reconciled our little city, its parks and thickets, and logs covered with sunflower seed, with the great Northwest, its swamps, its spruces and aspens; but we rejoiced in the opportunities they had brought us and the memories which they left.

Bird-Lore's Fifteenth Christmas Bird Census

BIRD-LORE'S annual bird census will be taken as usual on Christmas Day, or as near that date as circumstances will permit. Without wishing to appear ungrateful to those contributors who have assisted in making the census so remarkably successful, lack of space compels us to ask each census-taker to send only *one* census. Furthermore, much as we should like to print all the records sent, the number received has grown so large that we shall have to exclude those which do not appear to give a fair representation of the winter bird-life of the locality in which they were made.

Reference to the February, 1901-1914, numbers of BIRD-LORE will acquaint one with the nature of the report of the day's hunt which we desire; but to those to whom none of these issues is available, we may explain that such reports should be headed by a brief statement of the character of the weather, whether clear, cloudy, rainy, etc.; whether the ground is bare or snow-covered, the direction and force of the wind, the temperature at the time of starting, the hour of starting and of returning. Then should be given, in the order of the A. O. U. 'Check-List' (which is followed by most standard bird-books), a list of the species seen, with exactly, or approximately, the number of *individuals* of each species recorded. A record should read, therefore, somewhat as follows:

Yonkers, N. Y., 8 A.M. to 12 M. Clear, ground bare; wind west, light; temp., 38°
Herring Gull, 75. Total, — species, — individuals.—JAMES GATES.

These records will be published in the February issue of BIRD-LORE, and it is particularly requested that they be sent the editor (at the American Museum of Natural History, New York City) not later than December 28. *It will save the editor much clerical labor if the model here given and the order of the A. O. U. 'Check-List' be closely followed,*

The Migration of North American Sparrows

THIRTY-FIRST PAPER

Compiled by Prof. W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by LOUIS AGASSIZ FUERTES

(See Frontispiece)

WHITE-WINGED JUNCO

The migrations of the White-winged Junco are quite restricted, since the larger part of the birds breed in the Black Hills of South Dakota and the neighboring parts of Wyoming and Nebraska, and winter in the southern half of eastern Colorado. Thus the average distance traveled in migration is rather less than 500 miles. The first arrive in fall migration at Boulder, Colo., on the average, October 20, earliest October 17, 1909; Colorado Springs, Colo., average October 23, earliest October 19, 1892. They remain common all winter, and the larger part leave for their summer home in March. The last was seen in Mesa County, Colo., April 2, 1902, and the last at Colorado Springs, Colo., April 11, 1874.

SLATE-COLORED JUNCO

The Slate-colored Junco is one of the most abundant and well-known birds of the United States, east of the Rocky Mountains. From the eastern foothills of these mountains to the Pacific this species is broken up into several subspecies, but, very strangely, these forms extend north only to southern or central Alaska, and the Juncos of northern and northwestern Alaska are birds that winter in the eastern United States, and in spring migration pass up the Mississippi Valley, cross the Saskatchewan to the Mackenzie Valley, and thence turn almost due west and cross the Rocky Mountains to northern Alaska. A subspecies, the Carolina Junco, breeds in the higher parts of the southern Alleghanies from Georgia to Maryland; and it may be that some of the records from the southeastern United States given beyond for the Slate-colored Junco belong to the Carolina Junco. It is interesting to note how long the Junco remains close to the breeding-grounds before beginning the fall migration. No Juncos were seen at Weaverville, N. C., before October 18, though they nested upon the neighboring mountains, within five minutes' flight. In the spring, the last one left for the mountains April 19, though the nest-building could not occur until several weeks later.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Alfred, N. Y.....	15	March 19	March 5, 1910
Boonville, N. Y.....	7	March 24	March 14, 1903
Ballston Spa, N. Y.....	7	April 1	March 22, 1910

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Jay, N. Y.....	3	April 9	April 8, 1906
Hartford, Conn.....	10	March 21	rare, winter
Springfield, Mass.....	5	March 20	March 7, 1894
Fitchburg, Mass.....	8	March 22	March 11, 1898
Southern New Hampshire.....	19	March 16	March 8, 1890
Wells River, Vt.....	5	March 26	March 23, 1907
St. Johnsbury, Vt.....	8	March 21	March 2, 1905
Portland, Me.....	7	March 21	March 14, 1902
Phillips, Me.....	6	March 23	March 8, 1906
East Sherbrooke, Quebec.....	5	April 2	March 29, 1905
Montreal, Canada.....	8	April 4	March 29, 1889
Quebec City, Canada.....	20	April 17	April 10, 1904
Scotch Lake, N. B.....	9	March 22	March 2, 1902
St. John, N. B.....	11	March 30	March 18, 1898
Chatham, N. B.....	11	April 12	March 23, 1902
Pictou, N. S.....	9	April 4	March 16, 1889
Halifax, N. S.....	4	April 8	April 4, 1890
North River, P. E. I.....	4	April 6	April 4, 1890
Charlottetown, P. E. I.....	9	April 8	March 30, 1904
Chicago, Ill.....	22	March 12	rare, winter
Oberlin, O.....	12	March 6	rare, winter.
Plymouth, Mich.....	8	March 23	February 22, 1905
Plover Mills, Ont.....	8	March 20	March 9, 1887
Ottawa, Ont.....	24	April 1	March 22, 1908
Kearney, Ont. (near).....	11	April 3	March 19, 1903
Palmer, Mich. (near).....	5	April 9	March 19, 1894
Indianola, Ia.....	6	March 6	February 16, 1890
Wall Lake, Ia.....	3	March 17	March 5, 1911
Madison, Wis.....	7	March 9	rare, winter.
Lanesboro, Minn.....	5	March 19	January 23, 1894
Minneapolis, Minn.....	9	March 25	January 22, 1906
Elk River, Minn.....	9	March 25	March 11, 1887
White Earth, Minn.....	2	April 9	February 2, 1882
Southeastern Nebraska.....	7	March 9	rare, winter.
Southeastern South Dakota.....	7	March 24	March 18, 1889
Larimore, N. D.....	13	April 3	March 26, 1904
Pilot Mound, Manitoba.....	9	April 1	March 23, 1905
Aweme, Manitoba.....	16	April 2	March 17, 1910
Indian Head, Sask.....	8	April 1	March 25, 1910
Osler, Sask.....			April 14, 1893
Edmonton, Alberta.....	2	April 15	April 3, 1910
Hay River, Mack.....			April 23, 1908
Fort Simpson, Mack.....	6	May 3	April 28
Forty-mile, Yukon.....			May 3, 1898
Nulato, Alaska.....			May 17, 1868
Kowak River, Alaska.....			May 23, 1899
Point Barrow, Alaska.....			May 24, 1882

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Long Island, Ala.....	2	April 5	April 8, 1912
Northern Georgia.....	5	April 7	April 12, 1902
Mt. Pleasant, S. C.....	2	March 26	March 29, 1909
Raleigh, N. C.....	10	April 11	April 24, 1907

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Weaverville, N. C.....	3	April 15	April 19, 1891
Variety Mills, Va.....	10	April 19	April 25, 1895
French Creek, W. Va.....	3	April 23	May 3, 1891
Waverly, W. Va.....	4	April 22	April 28, 1904
Washington, D. C.....	12	April 30	May 17, 1908
Berwyn, Pa.....	11	April 20	May 11, 1899
Philadelphia, Pa. (near).....	13	April 26	May 18, 1906
Morristown, N. J.....	9	May 2	May 5, 1909
New Providence, N. J.....	7	April 24	May 2, 1887
New York City, N. Y. (near).....	13	April 28	May 23, 1907
Hartford, Conn.....	8	May 5	May 12, 1911
Providence, R. I.....	11	May 1	May 18, 1900
Boston, Mass.....	6	April 30	May 10, 1897
New Orleans, La.....			March 29, 1896
Biloxi, Miss.....			April 9, 1903
Vicksburg, Miss.....			April 19, 1900
Helena, Ark.....	13	April 11	April 22, 1910
Athens, Tenn.....	7	April 8	April 18, 1907
Eubank, Ky.....	7	April 13	April 21, 1888
Versailles, Ky.....			May 12, 1909
Monter, Mo.....	5	April 15	April 28, 1907
St. Louis, Mo.....	7	April 16	May 29, 1882
Chicago, Ill.....	13	May 3	May 28, 1906
Waterloo, Ind. (near).....	15	April 21	May 1, 1904
Oberlin, O.....	16	April 27	May 20, 1907
Wauseon, O.....	13	April 23	May 8, 1892
Plymouth, Mich.....	11	April 23	May 1, 1906
Detroit, Mich.....	16	April 24	May 4, 1904
Central Texas.....	6	March 18	March 29, 1894
Bonham, Tex. (near).....	4	April 6	April 23, 1884
Onaga, Kans.....	11	April 16	April 22, 1892
Southeastern Nebraska.....	8	April 23	May 20, 1907
Southeastern South Dakota.....	4	May 6	May 17, 1891
Keokuk, Ia.....	11	April 22	April 27, 1902
Grinnell, Ia.....	4	April 26	May 19, 1890
Indianola, Ia.....	5	April 29	May 6, 1900
Madison, Wis.....	4	May 1	May 14, 1910
La Crosse, Wis.....	6	May 3	May 13, 1907
Lanesboro, Minn.....	8	May 4	May 14, 1893
Minneapolis, Minn.....	4	May 3	May 24, 1907
Elk River, Minn.....	4	May 2	May 12, 1883

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Berkshire, Mass.....	3	October 2	September 28, 1911
Providence, R. I. (near).....	16	October 8	September 17, 1911
Hartford, Conn.....	12	October 2	September 22, 1895
New York City, N. Y.....	13	September 28	September 14, 1908
Orient, Long Island, N. Y.....	5	September 27	September 21, 1907
New Providence, N. J.....	9	October 11	September 27, 1887
Morristown, N. J.....	8	September 30	September 18, 1908
Englewood, N. J.....	9	October 1	September 17, 1887

FALL MIGRATION, continued

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Philadelphia, Pa. (near).....	11	October 4	September 23, 1884
Beaver, Pa.....	6	October 6	October 3, 1908
Berwyn, Pa.....	9	October 11	October 4, 1897
Washington, D. C.....	12	October 8	September 22, 1913
French Creek, W. Va.....	5	October 7	September 30, 1890
Weaverville, N. C.....	3	October 23	October 18, 1890
Raleigh, N. C.....	15	October 31	October 23, 1886
Greensboro, Ala.....			October 25, 1893
Charleston, S. C. (near).....	3	November 13	November 4, 1897
Kirkwood, Ga.....	5	November 15	November 4, 1898
De Funiak Springs, Fla.....			January 1, 1908
Chicago, Ill.....	16	September 18	August 30, 1896
Detroit, Mich.....	8	September 23	September 11, 1894
Waterloo, Ind. (near).....	5	September 27	September 23, 1889
Oberlin, O.....	10	October 1	September 24, 1906
Wauseon, O.....	6	October 10	October 1, 1889
Independence, Mo.....	3	October 10	October 5, 1889
Monteer, Mo.....	6	October 17	October 8, 1908
Lexington, Ky.....			September 30, 1904
Eubank, Ky.....	4	October 11	October 5, 1889
Sewee, Tenn.....	3	October 31	October 27, 1898
Athens, Tenn.....	8	November 4	October 21, 1908
Monticello, Ark.....	3	November 2	October 31, 1911
Vicksburg, Miss.....	2	November 1	October 28, 1899
Covington, La.....			November 28, 1899
Lanesboro, Minn.....	6	September 25	September 20, 1889
North Freedom, Wis.....	4	September 22	September 14, 1904
Madison, Wis.....	5	October 1	September 19, 1911
Grinnell, Ia.....	5	September 27	September 15, 1889
Hillsboro, Ia.....	4	September 30	September 24, 1896
Keokuk, Ia.....	12	October 6	September 11, 1894
Aweme, Manitoba.....			September 4, 1898
Margaret, Manitoba.....	3	September 13	September 10, 1910
Southeastern South Dakota.....	6	September 21	September 3, 1889
Southeastern Nebraska.....	5	October 9	October 2, 1889
Onaga, Kans.....	16	October 20	October 12, 1898
Gainesville, Tex.....			October 7, 1885

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Kowak River, Alaska.....			September 12, 1898
Fort Simpson, Mack.....			November 18, 1905
Indian Head, Sask.....			November 24, 1904
Aweme, Man.....	13	November 2	November 17, 1905
Madison, Wis.....	7	November 16	rare, winter.
Ottawa, Ont.....	18	November 3	November 16, 1892
Plover Mills, Ont.....	4	October 31	December 24, 1890
Palmer, Mich. (near).....	3	October 28	November 21, 1894
Pictou, N. S.....			November 10, 1894
Scotch Lake, N. B.....	6	November 15	December 4, 1902
Montreal, Canada.....	6	November 5	November 15, 1908
Hebron, Me.....	5	November 21	December 8, 1906
Phillips, Me.....	5	November 27	December 26, 1904

OREGON JUNCO

The Oregon Junco is a subspecies of the eastern Slate-colored Junco, and occurs on the Pacific coast, breeding in southern Alaska and northern British Columbia, and wintering south to southern California. Here, in winter, it joins company with several other Juncos so similar in looks and habits that it is difficult to distinguish them. The only sure migration records available for this form are of its arrival April 12, 1882, at Portage Bay, Alaska, and April 19, 1909, at Kupreanof Island, Alaska.

Notes on the Plumage of North American Sparrows

THIRTIETH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Slate-colored Junco (*Junco hyemalis hyemalis*, Figs. 2-4). A Junco in nestling or juvenal plumage looks more like a Song Sparrow than its gray-and-white parents. Both above and below it is heavily streaked with blackish, the back feathers being margined with rusty, those of the underparts with buffy or whitish. The two, or more rarely, three, pairs of white, or largely white, outer tail-feathers, however, suggest its relationships, which are fully revealed as it passes through the postjuvenal molt into first winter plumage. At this molt only the tail and wing-feathers are retained; the rest being shed. The young male now resembles the adult female (Fig. 3), but may be somewhat browner, while the young female (Fig. 4) is often decidedly browner, with pinkish brown flanks, when it suggests certain of the pink-sided western Juncos.

There is no spring molt, and the summer plumage, with its more sharply contrasted areas of slate-color and white, is the result of the wearing away of the brownish tips of the winter plumage.

So far as I am aware, this simple order of molt is followed by all Juncos, and it will, therefore, be necessary only to enumerate the remaining North American species and subspecies, giving with each an outline of its range and characters. This, however, cannot be done satisfactorily. The Juncos respond so readily to the influences of their environment, and the ranges of the mountain-inhabiting forms are so difficult to determine, that few ornithologists are agreed on the status of the forms of this group. I merely follow, therefore, the arrangement of the 'Check-List' of the American Ornithologists' Union.

1. **White-winged Junco** (*Junco aikenii*, Fig. 1). A distinct species, known by its large size and white wing-bars.

Range. "Central Rocky Mountain region. Breeds in the Bear Lodge Mountains, Wyoming, the Black Hills, South Dakota, and in northwestern Nebraska; winters from the Black Hills to southern Colorado and western Kansas, and casually to Oklahoma and New Mexico," (A. O. U.)

2. **Slate-colored Junco** (*Junco hyemalis hyemalis*, Figs. 2-4). The gray color and comparative absence of brownish or pinkish wash, particularly on the sides, are the distinguishing characters of this race.

Range. "Eastern and northern North America. Breeds in Hudsonian and Canadian zones in northwestern Alaska (tree limit), northern Mackenzie (tree limit), central Keewatin, and central Ungava south to base of Alaska Peninsula, southern Yukon, central Alberta, northern Minnesota, central Michigan, Ontario, and mountains of New York, Pennsylvania, and Massachusetts; winters throughout the eastern United States and southern Ontario south to the Gulf coast; casual in California, Arizona, and New Mexico; straggles to Siberia." (A. O. U.)

3. **Carolina Junco** (*Junco hyemalis carolinensis*). Slightly larger than the last, the upperparts and breast uniform slaty gray without a brownish wash.

Range. "Southern Alleghanies. Breeds in the Canadian zone (overlapping into the upper Transition) of mountains from western Maryland, Virginia and West Virginia south to northern Georgia; winters in adjacent lowlands." (A. O. U.)

4. **Oregon Junco** (*Junco hyemalis oregonus*, Fig. 5). A member of the black-headed group which is confined chiefly to the Pacific coast. The black head, sharply defined from the mahogany brown back, pinkish brown sides, and absence of white on the third from outer tail-feather distinguish this form.

Range. "North Pacific coast. Breeds from Yakutat Bay, Alaska, to Queen Charlotte Islands, British Columbia; winters southward along the coast to Santa Cruz and San Mateo Counties, California; casually to eastern Oregon and Nevada." (A. O. U.)

5. **Shufeldt's Junco** (*Junco hyemalis connectens*). Resembles the Oregon Junco, but the colors are less intense.

Range.—"Rocky Mountain region. Breeds from the coast of southern British Columbia east to west-central Alberta and south to northern Oregon; winters over entire Rocky Mountain tableland to eastern Colorado, Arizona, New Mexico, western Texas, Chihuahua, and Sonora; casual in northern Lower California." (A. O. U.)

6. **Thurber's Junco** (*Junco hyemalis thurberi*). Similar to the Oregon Junco, but the back is much paler, being a bright pinkish brown, the head and breast still remaining black.

Range.—"Mountains of California. Breeds from southern Oregon south through the Sierra Nevada and coast ranges of California to Laguna Hansen Mountains, Lower California; winters at lower altitudes, straying to Arizona." (A. O. U.)

7. **Point Pinos Junco** (*Junco hyemalis pinosus*). Resembles Thurber's Junco but has the throat and breast gray.

Range.—"Coast strip of San Mateo and northern Monterey Counties, California." (A. O. U.)

Notes from Field and Study

Notes from Rochester, N. Y.

Please find enclosed pictures from one of the Park bird-feeding stations, taken by R. E. Horsey, Foreman of Highland Park. Sunflower seed is put in the hopper, which is patronized quite extensively by the Chickadees, Nuthatches, and Cardinals.

The Bird 'Tepee' is made of three rather small arborvitæ trees wired together at the top and suet and fat pork are tied to the branches. It is well patronized by Downy Woodpeckers, Nuthatches, Chickadees, Cardinals, and Blue Jays. A box is placed underneath to keep the snow off the small seeds and

bread crumbs for the seed-eating birds, and this is well patronized by the Juncos, in addition to the birds before mentioned.

I think it will be of interest to you and your readers to know that on December 11, 1913, Mr. Horsey and myself were work-



CHICKADEE ON 'FOOD-HOPPER'
R. E. Horsey



WHITE-BREASTED NUTHATCH ON
'FOOD-HOPPER.' R. E. Horsey

ing in the barberry collection in Highland Park when we heard bird-notes which were new to us, and, upon investigation, we discovered the author of them clinging to a bush, and were able to approach so close to him as to reach out our hands to within one foot of the bird.

Of course, under those conditions, we were able to see all the markings very distinctly, the rufous crown, the black throat, the distinctly brownish coloring on the sides (this being a great deal stronger than on the Black-capped Chickadee), the whitish underparts, and the rather dark or ash-colored back, which tallies with descriptions of the Acadian Chickadee.

After telephoning to authorities on birds, who seemed to doubt us, we went back in about a half-hour, and again looked him over under about the same conditions.

On January 2, 1914, while putting out bird-feed, I saw two more at close range, this time in the evergreens.

Remembering the trouble of the previous occasion, I hunted up Mr. Horsey,



FOOD-SHELF AT WINDOW

R. E. Horsey

and we went back and looked them over.

By good luck, a few minutes later, we were able to get one of the leading bird students of this locality to take a look at them.

Although he was very much of a 'doubting Thomas' when we told him what we had seen, after he had thoroughly studied the birds, he was obliged to admit that they were Acadian Chickadees.

I have seen them successively January 5, 10 and 16.

We hope that they will remain undisturbed and will come again next winter.

I have taken up bird study, feeding, and protection for the Local Park Board, and Mr. Horsey, who is much interested in birds, is assisting me in every possible way.—WM. L. G. EDSON, 12 Fairview Ave., Rochester, N. Y.



A BIRD 'TEPEE'

R. E. Horsey

Wasps in Bird-Boxes

We usually think of birds as being in clover when plenty of insects and such other small creatures are about; but it seems that some of these are a menace to the birds, and sometimes in an unexpected quarter.

A neighbor made careful preparations for Purple Martins. The birds came, and there was every indication that they would stay; but, after a little while, though, they inspected the boxes frequently, they went away. Later it was found that the box was infested with wasps.

Twice during the season have I found wasps in boxes, the last inspection being on September 20. Along with the efforts to give the birds ventilated and otherwise comfortable quarters, protect them against vermin, etc., it is also well to be on the lookout for these troublesome pests.—R. F. O'NEAL, *St. Louis, Mo.*

Harris's Sparrow at Rantoul, Illinois

Observing in the recent issues of BIRD-LORE notes on the occurrences of the Harris's Sparrow in northern Illinois and Wisconsin during last spring, I wish to add another record in connection with them.

On April 26, an even dozen of individuals of that rarity, the Harris's Sparrow, were observed and correctly identified. They were in a scrubby hedgerow, near a small creek, in conjunction with other species of Sparrows, Towhees, and birds which ordinarily are found in such a location. As this place was not visited for several days, no further record was obtained.—GEORGE E. EKBLAU, *Rantoul, Illinois.*

The Starling in Maine

On August 16, 1914, I saw on the island of Monhegan, Maine, a flock of 25 to 30 European Starlings, certain of which were obliging enough to alight and give an opportunity for positive identification.

It may be of interest to record also that from August 17 to August 28 Cape May Warblers were common on the island, from five or six to a score being repeatedly seen on a single outing.

I could not learn that Starlings had been seen before at Monhegan.—WM. FULLER, *Auburndale, Mass.*

Instincts of a Parrot

The following actions of a Parrot belonging to an acquaintance of mine may be of interest as an illustration of bird intelligence.

The Parrot laid three eggs upon which it sat for three weeks. Though the eggs failed to hatch, at the end of the three weeks the bird attempted to feed the eggs. Three weeks later they were removed. After an interval of four years, the Parrot laid one egg, but made no attempt to incubate it, merely rolling it about as a toy.—R. F. HAULENBECK, *Newark, N. J.*

Little Blue Heron in New Jersey

I have the pleasure of reporting an uncommon bird for this latitude. July 18 (or perhaps 25) I saw on the shore of Lake Hopatcong, New Jersey, an immature Little Blue Heron. It was pure white in plumage except for a little tinge of slate-blue on the head and neck; the legs were greenish yellow. It permitted me to come within a few yards in my canoe, allowing an easy, naked eye identification.—R. F. HAULENBECK, *Newark, N. J.*

The Whisper Song of the Catbird

I wonder if any of the readers of BIRD-LORE have noticed what I have called the 'whisper-song' of the Catbird, occurring in the fall, a little before the time of autumn migration.

I first observed this fact in 1908, and I have this record in my journal:

"September 14, 1908.—Yesterday, while a visitor was mending his automobile down near the woodpile, I noticed the low singing of a bird, apparently very close and behind me, in some tall weeds between the grape-vines and the woodpile. Today I heard it again, and thought it a Catbird's voice. After repeated trials, I at last located the singer. He was a Catbird, not over four or five feet from me, sitting trustfully on a stick among the weeds, quite unconcerned, and singing in such a low, fine voice that I could only

just hear him. The performance was like that of a bird in a reverie—like the ghost of a thought of a song. His throat merely trembled, and occasionally the bill parted just a trifle. Yet his song seemed the full repertoire of the Catbird, including, during the time I listened, two faint mews. I listened some five minutes, and it kept up very steadily. He seemed no more disturbed by my presence than he had been the day before, when an automobile and six or eight people, talking and laughing, were within ten feet of him. I suspect this bird was one of my favorite singers of the summer. Altogether, this was a rich experience."

On September 17, 1910, I made this record: "The Catbird sings again his dreamy, ghost-like song among the weeds of the old woodpile, back of the grapevines."

I have no further records in my journal, but almost every autumn I have heard the whispering song, and this September (1914) a Catbird, perhaps the same, perhaps another, has been singing in some sumach and hazel bushes back of my son's sleeping-porch; possibly because the former haunt of weeds and woodpile has been cleared away. This time the singer seems more nervous and suspicious, mews oftener, does not so placidly permit observation, and sings slightly louder; but, on the whole, the performance is the same.

What I should like to ask the editors and readers of BIRD-LORE is this question: Have other observers noticed this trait in the Catbird, or am I to suppose this a trick of my own particular bird? I suspect that all Catbirds do it and, not only that, but that many other birds also indulge, at this season of the year, in whisper or reverie songs, in memory, as it were, of departed summer joys. At any rate, a Chewink has been singing, in much the same voice and mood, lately, in the same hazel and sumach clump, and my daughter-in-law reports hearing a Wren in our lane whispering a song.

I should be grateful to learn what others may know on this point.—J. WILLIAM LLOYD, *Westfield, N. J.*

Prothonotary Warbler in Massachusetts

At Hopkinton, Mass., on May 24, we saw a Prothonotary Warbler which, at the suggestion of an official of the local Audubon Society, I am reporting owing to its rarity in this vicinity. The bird was not at all shy, spending the entire day within a radius of about two hundred yards of the house, often coming into an apple tree so near that we were able to distinguish his markings with ease. He sang almost without interruption from 6:30 A.M. until late in the afternoon. The song slightly suggests that of the Yellow Warbler, but is fuller and more penetrating, and different in rhythm. In Chapman's book on Warblers, he mentions only five records for this species in Massachusetts, the last in 1894.—ISABELLE ALEXANDER ROBRY, *Boston, Mass.*

Mud for Nest-Builders

An incident of the past few days in connection with our Martin colony may be of interest to other lovers of these sociable birds.

A quantity of thoroughly softened earth was dipped from a sunken barrel intended for a lily, and left to dry before removal. Almost immediately it was visited by the female Martins, who had already begun their nests, and they were very active all the morning filling their beaks with mud and packing it away in the nearby house. Often five or six birds would be on the ground at the same time. Every morning following, the mud has been watered, and the slight trouble well repaid by the evident pleasure of the birds in finding it so near at hand. A small heap of river-sand near the same barrel is visited occasionally; but whether it is eaten, or used in the nests, cannot be determined at present.

Anyone will be convinced, after a little reflection, that Martins (and other mud-using birds) must often be compelled to go long distances for this material, or dispense with it entirely in towns with paved streets, and nearly everywhere in

dry seasons. Yet only accidentally was this need brought to our notice, notwithstanding we endeavor to give the Martins every encouragement and protection.

A mud-pile will be provided each year, in future, for our Martins and for the Robins, who have also begun to use it.—T. H. WHITNEY, *Atlantic, Iowa*.

**Acadian Chickadee at Groton, Mass.,
February, 1913**

When the February, 1913, issue of BIRD-LORE reached me, I read with much interest the various reports of Acadian Chickadees in New England. The very next morning (Feb. 4) I looked out of my window, and there was a little Brown-cap on my spruce hedge. Since then, he has been my guest nearly every day, *with* but not quite of a group of Black-caps. For he has a marked individuality, less nervously alert and less assertive than his commoner cousins. I enclose a photograph of him in the saucer; which, though small, shows the brown shading off on the back, in contrast to the black of the Chickadee on the railing.—S. WARREN STURGIS, *Groton, Mass., Feb. 21, 1913*.

**Occurrence of the Acadian Chickadee in the
Hudson Valley**

In BIRD-LORE's last Christmas Census, my Rhinebeck record of the Acadian Chickadee seemed to be its 'farthest south' for New York State. On Thanksgiving Day, November 27, 1913, a friend telephoned to me that he had seen two in some cedar woods about four miles south of the village, on the estate of a neighbor

who had hung up suet which these Chickadees had discovered. I promptly went down to see them and found them with a flock of Black-capped Chickadees. I made repeated visits, and always found them in the same locality, and soon noticed that there were three, but could not tell if the third was a fresh arrival or not. I saw them throughout December, but the subsequent storms prevented my keeping track of them thereafter.

On December 21, an Acadian Chickadee came to the suet hung by Mrs. James F. Goodell outside her window in Rhinebeck village. It was very tame and independent



BLACK-CAPPED (AT THE LEFT) AND ACADIAN (AT THE RIGHT) CHICKADEES AT GROTON, MASS., FEB. 1913
Photographed by S. Warren Sturgis

and did not pay much attention to the other Chickadees, although it tolerated their presence. It remained throughout the winter, probably roosting in some neighboring spruces, and came daily to feed until March 12, when it was last seen. It seldom ate anything but suet,

although it had a variety to choose from, and those seen south of the village were often on the ground or on weed-tops, eating seeds. The Black-capped Chickadees showed a decided preference for sunflower seeds.

On one or two occasions, a second Acadian Chickadee was seen at Mrs. Goodell's feeding-shelf, but it seemed to be shy and soon disappeared. It may be interesting to note here that the following visited this food-station: Hairy Woodpecker, 4 or 5; Downy Woodpecker, 6 or 7; Blue Jay, 6; Crow, 1; House Sparrow, many; Redpoll, 4 or 5; Tree Sparrow, 6; Junco, 6 to 8; Brown Creeper, 3; White-breasted Nuthatch, 4 or 5; Chickadee, about 20; Acadian Chickadee, 2. Starlings and Golden-crowned Kinglets were about, but were not seen to visit the food that had been scattered.

Meanwhile I learned from Professor E. M. Freeman, of Vassar College, Poughkeepsie, that there were two or three Acadian Chickadees at her feeding-shelf and in the evergreens on the college campus quite regularly from January 22 to March 28, and these were again seen on April 13 and 21. From November 20, 1912, till March 29, 1913, she often saw three that were with a flock of Black-caps.

Mr. Allen Frost of Poughkeepsie likewise told me that on February 11, 1906, he saw three Acadian Chickadees with a flock of Black-caps and Red-breasted Nuthatches at New Paltz, Ulster County.

The above data give the Acadian Chickadee a more southern limit in New York State than does the Christmas Census, and also indicates that, although in the season of 1913-14 their migration was unusually widespread and pronounced, they nevertheless come down thus far more often than published records show.—MAUNSELL S. CROSBY, *Rhinebeck, N. Y.*

Loss of the Vesper Sparrow, at Orient, L. I.

The failure of the Vesper Sparrows to return to their usual haunts, at Orient,

L. I., summer of 1914, caused keen regret. The reason of their absence is somewhat of a question.

This Sparrow has always been a regular and not uncommon summer resident. It lingers late in autumn and early winter; midwinter records are plentiful, and the birds frequently brave the entire winter, evidently being influenced in their stay by the temperature.

The preceding winter was warm and open, and found these birds tarrying late, as usual, or induced them to advance only slightly southward. Then the sudden burst of winter, with clinging snow and sleet, hurled itself into the bird-world, taking the Sparrows unawares, and I believe that it wiped out absolutely the long-established Vesper Sparrows of Orient.

Though it is the popular opinion that the summer residents observed at the North in winter are individuals of the species from farther north taking the places of those that nested in the vicinity, my study of the Vesper Sparrow leads me to believe that these Sparrows observed in winter are the identical ones that bred here.

This is my reason for thinking that the exceptional winter of last year is the principal factor in the absolute disappearance of the Vesper Sparrows from Orient this summer.

There has previously been no variation in their numbers for a score of years.

The various pairs were scattered, returning each season to breed in their long-chosen localities. So attached do they become to certain fields or tracts that, covering a period of fourteen years, they have clung to them adapting themselves to the various changes from pastures to potato-fields, strawberry-beds, etc.—ROY LATHAM, *Orient, L. I.*

Notes from Hartford, Conn.

It would be quite interesting to know if other bird students in this state have noticed an unusually large number of Red-headed Woodpeckers this fall. Only

three years ago next February, a friend and I walked nearly eight miles in slush several inches deep, and in the face of a blinding snowstorm, to see the only specimen of this bird seen hereabouts for many years. Gratification upon finding the object of our search after such effort does not express how we felt. The next year one specimen only was reported, while the following season a pair and nest were observed all summer. This same pair has raised another lot of young in the same tree this summer; but the most interesting of all is the fact that within five miles of city hall there have been seen, in at least six different localities, during the past three weeks, some thirty-five to forty Red-heads, and most of them immature birds. This might indicate that they were breeding in this locality this season, or perhaps it is the question of food supply that brings them here now. However, several have been observed very carefully by members of the Hartford Bird Study Club, with the result that they are con-

fident the birds are breeding in this section. I am interested to know whether other students in Connecticut have noticed an increase in the number of Red-heads seen in the state within the last year or two.

Several years ago, so many Bluebirds were killed by the severe winter that the following spring almost none were seen, and many northerners who look anxiously forward to the first sweet whistle of this bird were utterly discouraged by the appalling mortality among the Bluebirds. Evidently they have 'come back,' since within the past month I have seen more of them than previously observed in many years all taken together. Have seen several large flocks of them, and on every walk, this past month, have seen from ten to fifty or more. Good luck to this faithful harbinger of spring, and may his kind multiply and fill the land with their sweet warble as the sap begins to flow in the sugar orchards.—GEO. T. GRISWOLD, *Hartford, Conn.*



BLACK-CAPPED CHICKADEE
Photographed by Arthur A. Allen, Ithaca, N. Y.

Book News and Reviews

DISTRIBUTION AND MIGRATION OF NORTH AMERICAN RAILS AND THEIR ALLIES. By WELLS W. COOKE. Assistant Biologist, Bull. No. 128. U. S. Dept. of Agric. Cont. from the Bureau of Biological Survey. 50 pages, 19 maps in text.

To his valuable bulletins on the Ducks and Geese, Shore-birds, Herons, and other groups, Professor Cooke now adds a study of the distribution and migration of our Rails, Cranes, Coots and Gallinules. The information he presents is designed "to serve as a basis for protective legislation for the species by states in which they are found." (Footnote, p. 1.)

The species which particularly require this protection are, as might be expected, those that are pursued by the sportsman and market-hunter. Chief among these is the Sora or Carolina Rail. Professor Cooke tells us that on September 15 and 16, 1881, two men killed 1,235 of these birds at the mouth of the James River, "while as many as 3,000 have been shot in a single day on a marsh of hardly 500 acres."

As Professor Cooke well says the Sora at all times of the year occupies ground not suitable for agriculture, and until the pressure of increasing population calls for the draining of its haunts, especially those in which it breeds, it may with a proper protection "survive in abundance as a game bird long after many other species have succumbed before the advance of intensive agriculture."

Such protection could no doubt be most practically applied by establishing a reasonable bag limit, and thereby prevent the slaughter which, under certain conditions of tide and migration, gunners apparently cannot resist inflicting on the Sora.

This paper is also welcome as a contribution to our knowledge of the distribution and migration of the group to which it relates; and the maps by which it is accompanied add in no small measure to its value.—F. M. C.

BIRDS IN RELATION TO THE ALFALFA WEEVIL. By E. R. KALMBACH, Assistant Biologist. Bull. No. 107, U. S. Dept. of Agric., Cont. from the Bureau of Biological Survey. 64 pages, 5 plates, 3 figures.

"The alfalfa weevil (*Phylonomus posicius* Gyll.), a pest introduced into the United States," Mr. Kalmbach writes, "has for several years been doing enormous damage to alfalfa crops in Utah." He was therefore sent to the infested area by the Biological Survey, to determine what part birds played in destroying this comparatively new enemy of the agriculturist.

The results of field studies made from May 8 to July 25, 1911, and April 1 to August 15, 1912, are presented at length in this paper.

Mr. Kalmbach concludes that, "with the possible exception of a fungous disease, which, in some localities, destroyed large numbers of the pupæ, there probably was, at the close of 1912, no other natural agency which had done more in holding the alfalfa weevil in check than the native birds."—F. M. C.

THE REFORMATION OF JIMMY AND SOME OTHERS. By HENRIETTE EUGENIE DELAMARE. Illustrated by F. Lilly Young. Lothrop, Lee & Shepard Co., Boston. 12mo., 352 pages, 8 plates.

The ways and means by which Jimmy's reformation was wrought are in themselves so interesting that, in spite of her frank didacticism the author has succeeded in making a readable story which holds even a 'grown-up's' attention from start to finish.

A thoroughly consistent humanitarian who can be nothing short of a vegetarian—might object to having a terrier kill trapped rats, for example. But if a vegetarian, he would also object to raising chickens for market, and the raising of chickens played no small part in the reformation of Jimmy. Jimmy, indeed,

was reformed on practical lines, which therefore no doubt appealed to Jimmy much as they do to the reader of his history.

Incidentally, Jimmy's brother and sister and father and mother shared in the reformation, and the story of how this was done may be read by parents to their children with possible benefit to them all. —F. M. C.

The Ornithological Magazines

THE AUK.—The July issue of 'The Auk' opens with a paper on 'The Moults and Plumages of the Scoters,—Genus *Oidemia*' by Dr. J. Dwight, Jr. It is illustrated with a color plate showing the heads of the six species belonging to this group of Ducks, with photographs of the different stages of plumage and with silhouettes of feather tips showing how the distal primary varies according to species, sex and age. Sportsmen as well as other readers should find much of interest in the facts presented.

A careful piece of work is 'A List of Birds from the Vicinity of Golden, Colorado' by R. B. Rockwell and A. Wetmore the article being well illustrated. A painstaking study of a different order is 'Early Records of the Wild Turkey' by A. H. Wright who has delved into many an old volume in order to gather the material from which he quotes so freely. Dr. R. W. Shufeldt discusses the 'Osteology of the Passenger Pigeon (*Ectopistes migratorius*),' the photograph of a skeleton being shown. G. L. Simmons in 'Notes on the Louisiana Clapper Rail (*Rallus crepitans saturatus*) in Texas' is of the opinion that this is the only form of the Clapper Rail found along the Texas coast.

A new Dusky Grouse (*Dendragapus obscurus flemingi*) from the Yukon, Canada, is described by P. A. Taverner, and a new Hawaiian Petrel (*Oceanodroma castro bangsi*) from Lat. 1° N. Long. 93° W. is named by J. T. Nichols. The many reviews in the department of Recent Literature indicate that most of the newly described birds of the present day are

merely races;—the subspecies mill grinds very fine!

The October issue completes the thirty-first year of publication of 'The Auk' with no serious competitor in sight. This is largely a South Atlantic number, for R. C. Murphy contributes 'Observations on Birds of the South Atlantic,' while J. T. Nichols and R. C. Murphy add 'A Review of the Genus *Phæbetria*.' Both papers are illustrated by numerous photographs taken by Mr. Murphy, many of them being snapshots from on board ship. The abundance of bird-life on the ocean is strikingly portrayed, and fishing for Tubinares with trailing bait and landing them out of the air seems to be an exciting sport. A new Albatross (*Phæbetria palpebrata auduboni*) is described from a series of two specimens, but the several races seem to rest on rather slender differences at best.

A. H. Wright continues his paper on 'Early Records of the Wild Turkey, II,' R. W. Williams, supplements his earlier lists with 'Notes on the Birds of Leon Co., Florida—Third Supplement,' and W. W. Cooke presents an annotated list of 'Some Winter Birds of Oklahoma,' 110 species in all, which is a large number to be recorded in a seven-months residence. It is pleasant to find a list prefaced by remarks on the weather, an important factor that is too often omitted.

A somewhat exhaustive paper on 'The California Forms of the Genus *Psaltiriparus*,' by H. S. Swarth, leads to no satisfactory conclusions. The Bush-tits, some four hundred specimens of them, are brought to the bar and left there, for in Mr. Swarth's own words 'The whole problem of the inter-relationships of the three species of *Psaltiriparus* is one of decided interest, the facts so far accumulated being of a suggestive though tantalizingly inclusive nature.' Then why publish them to tantalize everybody? There is certainly something uncanny about a series of four hundred specimens, nowadays, that does not show a new subspecies. The reviews of the ornithological journals is an extremely valuable

feature of this and other issues of 'The Auk.'

The death of the last surviving Wild Pigeon (*Ectopistes migratorius*), a bird twenty-nine years in the Cincinnati Zoölogical Garden, is recorded. This marks the extinction of a species once so abundant that the flocks darkened the sky for hours as they passed swiftly on their way. Here is a worthy text for every preacher of bird protection.—J. D., Jr.

THE CONDOR.—The contents of the September number of 'The Condor' are more varied than usual and contain two or three articles of special interest. Dickey's 'Nesting of the Spotted Owl' in Ventura County, in 1913, is a well-illustrated and valuable addition to our knowledge of the life history of this little-known bird.

In an obituary notice of Henry W. Marsden, Bishop details with skilful and sympathetic touch the difficulties encountered by an earnest and conscientious field-collector who seems to have been too little known to the majority of ornithologists. For the last twelve years Marsden has made California his home, usually spending the winters at Redlands or Witch Creek. He collected extensively in southern Arizona, and while there in 1905 added Salvin's Hummingbird to the list of birds found in the United States. He also added to the list of California birds the Chestnut-sided Warbler and the Horned Puffin, the latter only nine days before his death, which occurred at Pacific Grove, on Feb. 26, 1914.

Mailliard contributes 'Notes on a Colony of Tricolored Redwings' which bred this year on the Rancho Dos Rios in Stanislaus County, and compares the habits of the birds with those in a breeding colony in Madera County which he described some years ago.

In 'Bird Notes from the Sierra Madre,' Edwards gives a list of 47 species observed during a trip, in June, 1914, in the Big Tujunga Range in the Angeles National Forest. In a bare fir stub about 80 feet

high and 6 feet in diameter at the base, he found no less than six different kinds of birds nesting and rearing their young. The list included the White-throated Swift ("which seemed to have a nest in a large crack about 20 feet up"—a most unusual nesting-site), the Western House Wren, Cabanis' Woodpecker, Mountain Chickadee, Western Bluebird, and Western Martin, all of which, apparently, found congenial homes in this avian apartment-house.

Critical notes based on 'A Study of Certain Island Forms of the Genus *Salpinctes*' are given by Swarth, who describes a new subspecies (*Salpinctes guadeloupensis proximus*) based on a single specimen from San Martin Island, Lower California.

The most important article is Bryant's 20-page 'Survey of the Breeding-Grounds of Ducks in California, in 1914,' containing the results of an investigation made possible by a fund contributed by certain public-spirited friends of game protection. In this most interesting report, the breeding-grounds at Los Banos, Gridley, and the Klamath Lake region are described, and full notes given on the seven species of Ducks, the Canada Goose, Coot and several waders which were found nesting in these localities. Many nests were found destroyed by predaceous animals—in some cases, especially at Los Banos, due to lowering of the water, thus giving raccoons, weasels, and coyotes access to nests built on islets or tussocks of grass which at first were protected by the surrounding water. It is also probable that mere examination of some nests served to locate them for predatory animals which followed the observer's tracks, and in this way the ratio of nests destroyed was inadvertently increased.

Those interested in osteology will find much of value in the final article, in which Holden describes a new 'Method of Cleaning Skulls' by means of two solutions, one of phenol or carbolic acid, and the other of peroxide of hydrogen.

Bird-Lore

A Bi-Monthly Magazine
Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN
Contributing Editor, MABEL OSGOOD WRIGHT
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THREE of the leading bird artists of the world—Allan Brooks, George Lodge, and John Millais—are serving their country in the English army. The possibility of death coming to any one of these men, whose special talents may not appear again in generations, gives us a faint conception of what this war is costing the world in the loss of men who by their gifts and attainments were benefitting, not a race, but mankind. As bird-lovers let us at least be thankful that Louis Fuertes is an American!

THE appalling destruction of Rheas, recorded by Mr. Leo E. Miller, in BIRD-LORE for July-August last (p. 260), having been brought to the attention of the Treasury Department, it affords us unbounded satisfaction to state that on November 9, 1914, the Department prohibited the further importation of Rhea feathers into the United States, thereby, we believe, assuring the continued existence of one of the most interesting of American birds.

THE year just passed has been marked by an ever-growing interest in various measures designed to increase our bird population, and the birds' trust in man.

The desire to bring birds about our homes and establish friendly relations with them, which finds its first expression in a feeding-table or lunch-counter during the winter, now exerts itself through-

out the year. To the feeding-station, we add drinking-fountains, baths and nesting-boxes, and to all these an environment from which, so far as lies within our power, all bird enemies shall be excluded.

The economic value of these bird refuges calls for no comment, but possibly only those who have had the experience realize how much pleasure is to be derived from them. The person who makes four birds nest where only two nested before cannot but have that personal, intimate interest in their welfare which we have for the flowers in our garden. Both owe their existence to us, and to both we are, therefore, responsible. They are 'our' flowers and, in a measure at least, 'our' birds. Each will repay us after its kind, and from both we derive that type of satisfaction which comes from a successful attempt to be the presiding genius of that particular bit of the earth's surface we can call our own.

BIRD-LORE has published, from time to time, accounts of bird-refuges, both large and small.* In this number Mr. Robert Ridgway gives the first of three articles on his efforts to provide a refuge for birds in southern Illinois, and in our April number we plan to publish an account of what, in many ways, we believe will be the most productive bird-refuge which has been formed in this country. We shall not anticipate Mrs. Wright's story, but merely say that in the 'Birdcraft Sanctuary' there will be certain features which promise to be as valuable as they are novel.

WHY is it that America has not as yet produced a woman bird-photographer of the first-class, while in England there are several whose work ranks with the best? We shall not now attempt to answer this question, but during the coming year we are promised a fully illustrated article by Miss E. L. Turner, possibly the most successful woman bird-photographer in England, whose achievements, we trust, will stir the ambition of American women.

*See especially William P. Wharton's description of a visit to Baron von Berlepsch's estate at Seebach, Germany, which appeared in BIRD-LORE for September-October, 1914, pp. 329-337.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the editor, at 53 Arlington Avenue, Providence, R. I.

A CHRISTMAS MESSAGE TO AUDUBON SOCIETIES

THE COMING GENERATION

In view of the fact that so much interest is being shown in Junior Audubon Societies, and various clubs for young people devoted to the study of outdoor life, it seems fitting that at least once each year we should devote the space of the School Department to the boys and girls in whom we have so much hope, and for whom we are chiefly working.

We sometimes speak of "the coming generation" as though it was not already with us, projecting our thoughts into the future instead of focusing them upon the young folk around us. Perhaps this is one of the underlying reasons why there is often an apparent lack of sympathy between the grown-ups and children of a community, the one class being absorbed in and anxious to solve the problem of an ideal generation to come, while the other, marked by the eager impulsiveness of youth, grows up in reality without the attention and actual contact it deserves. This may seem a strange statement to make in view of the numberless agencies at work to raise the standard of teaching children, to better their condition at home and elsewhere, to provide suitable and adequate amusements for them, to supply all of their needs from the purely physical to the esthetic and spiritual,—in short, to make the material world and the moral, ideal for their use and upbringing in conformity with the most advanced theories of the age.

It is not, however, a mistaken point of view or a prejudiced one, for, if we will only stop to consider how few adults are able to see things as a child does, how very few are able to enjoy life as a child does, and how rare are those who are children in spirit all through the years entrusted to them, we must confess that much of our professed interest in youth is theoretical, and that the ordinary attitude of the mature person is one of aloofness to the coming generation.

One of the effective agencies in bringing the elders and children of to-day together is the inexhaustible world of Nature. In most matters we discriminate between what is suitable for the child and what for his seniors, but in nature-study, there is no necessity for classing things as juvenile or adult. From the starry heavens above to the depths of ocean and cañon there is

nothing which the child may not gaze upon unabashed, except for wonder at the multitude of objects and variety of motion he sees.

If we are fair in our estimate of the value of youthful attributes, we must concede that the normal boy or girl, *given a normal opportunity*, sees more and enjoys more than the average adult when turned loose in natural surroundings. Buoyant spirit, keen imagination, and a love of discovery are all characteristic of youth, and in perfect harmony with Nature. We of an older generation may well turn our attention to the methods that boys and girls employ out-of-doors, romping on the chilly days when we hover over a fire, book in hand, or look wistfully at more courageous pedestrians than ourselves.

Winter, snow, Jack Frost and all his icy accoutrements are the delight of healthy boys and girls; Spring is a wondertime; Summer a long holiday, and Autumn a season of storing up treasures for less fortunate days to come. Who that has ever trod the crust or felt the glare of an ice-bound pond, that has strung wild strawberries on a long and slender grass or has fashioned melodious pipes out of the yielding poplar, who that has hunted for the first bloodroot of the season along some bush-edged meadow or scuffed through the crackling carpet of withered leaves in a sugar-grove, upturning the fragile spring beauty, the delicate Dutchman's breeches or more rarely, about some mossy stump, a hidden clump of hepatica, who that has experienced these and a hundred other joys can fail to respond to the elation of youth in the open! Fortunate indeed are those who have such memories of childhood, to whom an apartment-house is unknown, to whom the sweet-scented byways and hedges of the country are familiar haunts for recreation, to whose nostrils the stale air of city streets has never penetrated!

We owe a duty to ourselves in becoming better acquainted with the child-life about us. We owe a greater duty to those children who are born and reared outside the pale of Nature. We owe perhaps the greatest duty to the coming generation in making nature-study a reality. It will cost us something to do this. We must slough off some conservatism, some prejudice, some disinclination to get out of the beaten routine. When once we awaken to the opportunity and grasp the meaning of this subject, when we gain confidence in Nature herself, then we shall be ready to meet our children halfway and, dropping cares and staid demeanor, to go gaily hand-in-hand with them on their venturesome journeys of discovery.

The birds will be our guides, for they know the points of the compass, the seasons, the woodland, marsh, and sea. What more beautiful bond of kinship could there be than for expectant youth and alert age to make the winged feathered folk their comrades in a search for Nature's treasures!

This is not a pretty fancy or a mere ramble of words. Many times the greatest Teacher of wisdom and joy referred to the trees, the flowers, and birds, emphasizing our need of acquaintance and sympathy with nature; and are calling to the mature the prophecy: "A little child shall lead them."—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XVIII: Correlated with Reading, Story-Telling and Literature.

BIRDS IN PROSE AND POETRY

November and December are here, ushering in the holiday season and New Year, with their snowy tokens of the Ice-King and Snow-Queen who rule Nature during the winter. Suddenly the leaves have deserted the trees, the grass has withered and browned, many birds and insects and most of the woodland folk have disappeared. The change has come so quietly, so irresistibly, that no one can tell exactly when it happened. Stillness, and austere serenity have settled down upon Mother Earth.

The outlines of hill and mountain are etched firmly and clearly in relief against the sky, and, as the Snow-Queen drops over all her white covering, they will stand out against the blue canopy above them in a beauty unknown at other seasons. By day or by night the eye is delighted with form and radiance, rather than with verdure and color.

In the cold, still air, sounds are carried through the leafless forests with startling clearness. Everything in Nature stands out distinct and isolated in the vibrant atmosphere. A change has come over all the world. We, alone among created things, seem to be spectators of this mysterious transition, instead of sharers in it.

Time was, hundreds of years ago, when primitive man was quite as much a part of nature as the animals and plants around him. To him, as to the child-like savage of modern times, all things had a personality in some measure like his own. Thus it came about, that he imagined much that was not really true, although he believed it at the time, and handed down by word of mouth many strange stories. These stories were mainly about things in Nature which are quite as familiar today as in those far-off ages, if we would only look about and discover them. We may call the stories of primitive man, *earth stories* and *beast stories*. When these stories distinctly teach some lesson of good or evil, we call them *fables*. Most of the oldest beast-fables, however, are merely stories without any moral. A myth is an earth story, too, but it is not told to point a moral. Moreover, it is often the combined story-telling effort of several generations, while a fable, like a parable and the briefer proverb, is short, concise, and invariably to the point.

There are so many of these ancient earth stories and beast fables which have come down to us in one form or another, that we may be surprised to find how old they are, and to how many different races of men they have furnished amusement and instruction. Since the fable without a moral, that is the simple

earth story or beast fable, is common to nearly all races in their early history, we may think of it as the A, B, C of literature.

No one knows what the earliest fable was, but if we turn to Judges 9: 7-16 we find a very old and famous fable, or parable, about the trees choosing a king, which gives a very clear idea of this kind of story. An interesting point about the fable of the trees is that it was told, not for the sake of the story, but to suggest something which the story-teller, Jotham, did not dare to say outright for fear of offending the jealous law-breakers about him. This story, then, really has a moral, and we shall find that all ages and generations of men have made much use of nature in writing or telling fables with a similar purpose.

Not only trees, but animals, birds, insects, and even inanimate things, figure as human beings in fables. Since everyone knows the sly fox, the cruel, crafty wolf, the gentle dove, the sagacious crow, the slow tortoise, the thrifty, industrious ant, and many of their natural associates, it is easy for a story-teller to use these creatures to point a moral, without making enemies of those whom he wishes to instruct and to criticise.

One of the most famous writers of fables was Æsop, a man who probably rose from the condition of a slave, to freedom and a position of considerable influence. He may have lived between five or six hundred or more years before Christ, but where he lived is not certain, or just how or why he suffered a violent death. We know him best by his fables; and, although he may never have written these down himself, they were told and retold and put into book-form by others, so that, for all time to come, every boy and girl may read his clever stories.

He was evidently familiar with all the common animals, birds, and insects of his neighborhood, for we find a long list of them in the index to his fables.

Of all the stories about intelligent Crows, none is better than Æsop's fable of 'The Crow and the Pitcher.' In the fable of 'The Fox and the Crow,' Æsop shows that sly flattery may bring the most intelligent to grief. An even keener rebuke to those who are brilliant but over-ambitious is given the guise of a fable about 'The Eagle and the Crow.'

Perhaps more widely-known, and possibly as old or older than Æsop's Fables, is a collection of moral stories which had their origin in India, and are today known as Pilpay's Fables. Pilpay is not the name of any particular man, but a corruption of an Arabic word *bid-bah*, meaning 'court-scholar, or master of sciences,' a title applied to the chief pandit of an Indian prince. You may sometimes find this title spelled Bidpai, and, since the fables attributed to Pilpay or Bidpai have been translated into so many different languages and have influenced so many later writers and readers, you would do well to spend a half-hour reading the history of these stories, which some Brahman philosopher probably collected from still older stories based upon the ancient folk-lore of the common people, and retold for the benefit of a wicked king whom he wished to reform.

'The Talkative Tortoise' is an ingenious tale about two wild geese who tried to help their friend the tortoise to fly to their beautiful home in the Himalayas.

By placing a stick in the tortoise's mouth and each taking an end, the trio flew up into the air the fable relates, much to the astonishment of the village children, who exclaimed: "There are two geese carrying a tortoise by a stick!" Unluckily, the tortoise had a short temper and forgot the admonition of his friends to keep his mouth shut, with the consequence that he fell into a courtyard and "split in two," which caused a tremendous uproar. Even the King came out to inquire what was the matter, accompanied by the Future Buddha, who had long wished to rebuke the King for talking indiscreetly and too much.

In the manner of a timely observation, the Future Buddha remarked that "They that have too much tongue, that set no limit to their speaking, ever come to such misfortune as this," adding:

"The tortoise needs must speak aloud,
Although between his teeth
A stick he bit; yet, spite of it,
He spoke—and fell beneath!

And now, O mighty master, mark it well,
See thou speak wisely, see thou speak in season,
To death the tortoise fell:
He talked too much, that was the reason."

Of course, the King could hardly fail to take so pointed a moral to himself; but, when he asked the Future Buddha if the rebuke was meant for him, the latter adroitly replied: "Be it you, O great King, or be it another, whosoever talks beyond measure comes by some misery of this kind." The fable closes by saying that so the Future Buddha "made the thing manifest," and thereafter the king "became a man of few words."

There are many beast fables in the old Indian collections of tales, and it would be difficult to select from the five hundred and fifty stories of the Buddhist Jataka, or from the equally entertaining Brahmanical collection known as 'Panchatantra,' both of which are used in Pilpay's fables, just those stories that might appeal most to you. 'The Buddhist Duty of Courtesy to Animals,' 'The Antelope, the Woodpecker, and the Tortoise,' 'The King and the Hawk,' 'The Transformed Mouse,' 'The Hare-mark in the Moon,' and 'The Ass in the Lion's Skin' are all excellent examples of the keen observation, ready pen, and simple skill of the fabulist.

Perhaps no writer of fables of later times was and still is better known than Jean de La Fontaine, who lived from 1621 to 1695. Born in the country, the son of a well-to-do gentleman, who held the responsible government office of "master of forests and streams"—an office not exactly comparable with any position in this country, but one which probably combined that of chief

forester, supervisor of highways and water privileges, and game-warden—La Fontaine grew up in easy circumstances and amid agreeable surroundings. It may have been his love of thinking and dreaming about everything he saw which caused him to idle away his time, or it may be that his lack of practical application was due to too much ease at home and want of regular employment. He was so interested in Nature that it is said he would forget his dinner and everything else, in order to watch the manoeuvres of a colony of ants burying a dead fly. The most ordinary creatures and their habits became a profound study to him, and he grew up to young manhood, well versed in the lore of wood and wild. When he visited the Court, with its lords and ladies of elegant manners and fashion, and wandered through the lovely but artificial pleasure-grounds of Versailles, he was but little impressed, and failed to please the King, who was accustomed to stately demeanor and flattering tongue. Nevertheless he gained friends, who, throughout his life, helped him from time to time, and who discovered his simple, childlike spirit beneath his somewhat sarcastic manner, and gladly forgave his many shortcomings.

La Fontaine wrote many poems and tales, not of the best, which contributed nothing to his reputation or fame, and these are seldom read except by critics and scholars. It is likely that he would not have been remembered had he not *found himself* at last, when he wrote his remarkable series of fables; and these he could never have written had he not been so familiar with the living creatures around him. Of all his fables, his own life contained perhaps the saddest and gladdest moral, for, while he had to pay the cost of many follies, he had the great joy of learning truth from Nature herself.

There is not space to quote more than a few random lines from his works, to show how keen and sure his observation was. To express the adage that those who do not seize opportunity when it comes, lose it, he told a fable in verse about the Heron, which let good fish go by for lack of appetite, but, when hungry, disdained the "mean little fishes" that chanced his way, and was finally glad to stay his empty stomach with a single snail, found on the river-bank.

This fable begins:

"One day—no matter when or where,—
A long-legged Heron chanced to fare
By a certain's river's brink,
With his long, sharp beak
Helved on his slender neck:—
Twas a fish-spear, you might think.
The water was clear and still;
The carp and the pike there at will
Pursued their silent fun,
Turning up, ever and anon,
A golden side to the sun,
With ease might the Heron have made
Great profits in this fishing trade.

So near came the scaly fry
 They might be caught by the passer-by.
 But he thought he better might
 Wait for better appetite,
 For he lived by rule, and could not eat,
 Except at his hours, the best of meat."

La Fontaine's lyric style suffers so much in translation that those of you who read French will enjoy his fables far more in the original.

'The Lark and the Farmer,' 'The Cat, the Weasel, and the Young Rabbit,' 'The Oak and the Reed,' 'The Grasshopper and the Ant,' are suggestive of his insight into the ways of wild creatures, the aspect of Nature in every mood, and the contrast between the real world and the artificial.

In the 'Two Doves,' he preaches a little sermon on contentment to those who are subject to "restless curiosity," and tire of home. The story is simple, a Dove who loved its companion like a brother, desired to see the world, and so set forth to fly about three days' time among enchanting new scenes and wonders. Hardly had it made its first flight, when a drenching thunder-storm came on, with no good shelter at hand. Next, attracted by some choice morsels of grain scattered here and there, it ventured to alight to feed, seeing another Dove on the ground; but scarcely had it snapped up one grain when it felt itself entangled in a snare. Luckily, the snare was much worn and loose, so the Dove succeeded in struggling itself free, bearing a dangling string from the snare, which attracted a Hawk, who would have caught the helpless Dove had not an Eagle "from the clouds" made the Hawk his prey.

"The Dove for safety plied the wing,
 And, lighting on a ruined wall,
 Believed his dangers ended all,
 A roguish boy had there a sling,
 (Age pitiless,
 We must confess),
 And by a most unlucky fling,
 Half-killed our hapless Dove;
 Who now, no more in love
 With foreign traveling,
 And lame in leg and wing,
 Straight homeward urged his crippled flight;
 Fatigued, but glad, arrived at night,
 In truly sad and piteous plight."

The moral of this fable is very appropriate to all friends and mates, and is exquisitely worded:

"To each the other ought to be
 A world of beauty ever new;
 In each the other ought to see
 The whole of what is good and true."

We may think of these lines as La Fontaine's message to us; and, truly, it is in the spirit of the Christmastide, which ushers in not only "a world of beauty" outside, but "peace and good will" within.

SUGGESTIONS

1. Look up myth, pandit, folk-lore, admonition, Buddha, Brahman, snare, responsible, artificial, maneuver, primitive, and ingenious.
2. Do you think it would be easy to write a fable?
3. Why is Jotham's fable about the trees such a perfect fable?
4. Who among your acquaintance can best tell a story?
5. Why is the Crow so good a bird to use in a fable?
6. How much of the description of the Heron in La Fontaine's fable is true, and how much is imaginative?
7. What sort of picture of a Heron do the lines 'with his long, sharp beak helved on his slender neck' give you?
8. What was La Fontaine's mood when he wrote about the "silent fun" of the carp and the pike?
9. What do you know about the feeding-habits of Herons? Do they "live by rule" and eat only at certain hours?
10. Why is the Lark associated with the Farmer? What is its nesting-habit?
11. What is the earliest reference to snaring birds that you can find? What races of men use the snare?
12. What is the origin of the sling? Has it ever been used as an implement of war?
13. Do you like true stories of animals and birds better than made-up ones?
14. How many true things do you know about birds which you have seen with your own eyes?

REFERENCES

- Encyclopædia Britannica, see fable, Æsop, sling.
 The Warner Library, see Vol. XX, under Pilpay and Vol. XV, under La Fontaine.
 Also look up Æsop.
 Uncle Remus' Tales, by Joel Chandler Harris.
 Jungle Book, by Rudyard Kipling.
 American Ornithology, by Wilson and Bonaparte, Vol. I, see description of the Crow.
 The Swallow Book, by Guiseppe Pitre, translated from the Italian by Ada Camehl in the form of a reading book.
 The Happy Prince and Other Tales, by Oscar Wilde.—A. H. W.

Two Quatrains from Thomas Bailey Aldrich

MAPLE LEAVES

October turned my maple's leaves to gold;
 The most are gone now; here and there one lingers;
 Soon these will slip from out the twigs' weak hold,
 Like coins between a dying miser's fingers.

DAY AND NIGHT

Day is a snow-white Dove of heaven
 That from the East glad message brings;
 Night is a stealthy, evil Raven,
 Wrapped to the eyes in his black wings.

FROM YOUNG OBSERVERS

BARN SWALLOWS

For the past few years our barn has become the dwelling-place of the beautiful Barn Swallows, and we certainly have had much pleasure watching them at their household duties. They are a little larger than the English Sparrow, but appear much larger on account of their wide wing-spread.

The male is a beautiful shade of steel-blue, shading to black above. Its breast and underparts are a bright chestnut-brown and brilliant buff, that is most exquisite when the sun shines on it. Its tail is forked and slender. The female is smaller and paler and with her tail less forked. To me this is one of our most beautiful birds.



YOUNG BARN SWALLOW

It builds its nest up in the rafters of the barn, and it is built of clay or mud mixed with straw, held together by the glutinous saliva of the bird and lined with fine grass and feathers.

While the female is on the nest the male treats her very kindly and tenderly, feeding her and even relieving her of her task for a short time, so that she may fly abroad for exercise and refreshments.

The young hatch from the white eggs spotted with brown in about eleven days, and in about two weeks are able to leave the nest, and in about another week take very good care of themselves. Even then the parents, when they meet the young on the wing, will sometimes give them food.

The flight of these birds is beyond description. When they wheel about the barn, and skim over the fields, or even when they are sitting on the telephone wires, they are most graceful.

The one fault I can find with these birds is that they are not very tidy about their homes. Most birds clean every scrap of refuse away, but the Barn

Swallows are so busy flitting back and forth that they have no time to bother about housekeeping; and we can hardly blame them when with every click of their bills we know some insect is destroyed. They always eat on the wing. They all live together, and I have never heard of a Swallow living alone. They have no song, but are just as much beloved by everybody as if they did have one as beautiful as the Robin's.—MARY KOUWENHOVEN, 3 *Kouwenhoven Place, Brooklyn, New York.*

[One of the familiar birds of the country, the Barn Swallow ought to be known by every boy and girl who is so fortunate as to live in the country. Even city children may see the Barn Swallow in the parks or elsewhere during migration. Especially to be commended is the observation of the "exquisite" effect of the sun shining on the Swallow's breast. Nowhere in Nature can more beautiful color effects be seen than in the plumage of birds. As to song, the Barn Swallow during the mating and nesting season gives a most pleasing twitter, which may be called a simple song. One may easily recognize the bird by it. The illustration accompanying this contribution was made at Cold Spring Harbor, Long Island, where Barn Swallows nest regularly and in some numbers.—A. H. W.]

OBSERVING BIRDS IN WINTER

I thought I would have to wait until next spring, when we move back to the country before I would see any birds but Sparrows, for my home is in a crowded town. But at different times during this winter I have seen a Shrike which we boys have watched kill Sparrows. I have also seen White-breasted

Nuthatches, which feed in the trees in the street where I live. One day from the front window of my house I saw a little brown bird on a tree trunk on the other side of the street. I ran over, and was so busy following him around the tree, that I didn't notice the ash-box, and of course fell into it. But it didn't frighten the brave little Brown Creeper, who kept going up around the tree. When I got up, he flew to the bottom of another tree and began going around up that. On the morning of November 2, which was foggy, I saw on one of our clothes-posts a Downy Woodpecker which seemed to be very busy at something. I went out to see what he was doing, and found that he had started to drill a hole. I thought that he would give it up, the post was so hard. But the



DOWNY WOODPECKER'S NEST-HOLE
IN POST

Photographed by H. George Cottrell

next day he had drilled in, so I could see that the post was hollow all the way to the top. So I nailed a tin on the top to keep out the rain. I knew it was Mr. Downy that drilled the hole by the red on his head. In a few days I saw that the nest was occupied by Mrs. Downy. One day at 4 P.M. I went out and tapped on the post, and Mrs. Downy came out and flew into a cherry tree next door. After I went in the house she came over to the fence, then she flew over on the the post and went up to the hole and put her head in, then pulled it out quick. After repeating this several times, she went in. My mother told me that the hole was made to roost in on cold winter nights. Mrs. Downy seemed to be the boss, and chased Mr. Downy away and went to roost herself, because I always saw Mrs. Downy go in, but never Mr. Downy. I don't like to get up early these cold mornings, and I guess Mrs. Downy doesn't either, because one morning I saw her fly out after eight o'clock. One day a neighbor's cat came over the fence and was sniffing around the post, and my mother chased him away. The cat came around several times after that. I haven't seen Mrs. Downy since January 10. I think the cat climbed the post and got the bird.

H. GEORGE COTTRELL (age 8), 14 Sharon Avenue, Irvington, N. J.

[Bird-study in winter is always rewarding if one has sufficient interest to discover what the birds which spend the cold season with us, are doing. The subject of the roosting holes of birds in winter would be admirable for a composition, provided some original observations were made first. Another excellent subject is the habits of birds with reference to rising and retiring at different seasons of the year. Since keen, reliable observation is the basis of good bird-study, teachers and pupils both should cultivate it, rather than depend too much on books.—A. H. W.]



THE CROW

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET No. 77

With the approach of winter, the country loses its charm for many persons. The green of the fields and the riotous verdure of the woods are gone, and the brown expanses of dead grass and weeds are relieved only by the naked blackness of the forest trees. This, however, is a splendid time to go a-field to look for birds. If the wild life is less abundant now, even more sparse is the human life, and so you will have the country more to yourself.

One of the birds very sure to be seen and heard in a walk is the Crow, for many of his race spurn the popular bird-movement southward in the autumn when the North begins to freeze. I like him best at this time of the year. There is no young corn for him to pull now, no birds' nests to pilfer, and no young chickens to steal. He has few places where he can hide, and his black shape looms sharp against the snow-clad hills. I see him sometimes in January as we come down the Hudson together—I in a pullman and he on an ice-floe.

Now and then I see him strike into the water with his beak, or fly a short distance to a rock or exposed gravel-bar, where things that die and float in the river become stranded. Once I surprised him in the woods, where he had attacked an old, rotten pine-stump. He had torn half of it to pieces and the fragments lay scattered on the snow. Perhaps he was seeking certain insects taking their long winter sleep, or he may have been after beetles. To fathom the mind of a Crow takes not only persistent effort but considerable imagination.

At this season Crows are highly gregarious creatures; especially at night, when they sometimes collect by hundreds or thousands in some favorite grove.

Some years ago there was such a roost near the town of Greensboro, North Carolina. It was resorted to for several years in succession, and was a source of no end of wonder to the people of the surrounding country. The roost occupied several acres in a grove of second-growth, yellow-pine trees. By four o'clock in the afternoon the birds would begin to arrive, and from then until dark thousands would come from all directions. Singly, by twos and threes, in companies of ten, twenty, or a hundred, they would appear, flying high over the forest trees, driving straight across the country, pointing their line of flight as direct as only a crow can fly to their nightly rendezvous. Early in the morning they were astir, and if the day was bright it would not be long until all had departed, winging their way over the fields and woodlands to widely scattered feeding-grounds.

Often I watched them come and go, and one night walked beneath the



CROW

Order—PASSERES
Genus—CORVUS

Family—CORVIDÆ
Species—BRACHYRHYNCHOS

National Association of Audubon Societies

sleeping hosts and shouted aloud to them; but they did not heed my presence, nor was I ever able to arrive at any reasonable explanation for their nightly assemblies. Surely they did not gather thus, as some writers have suggested, purely because of an impulse for sociability and for love of their kind, for I saw them quarreling among themselves on many occasions.

Especially do I recall one evening when, as I watched them coming to roost, I became conscious of an unusual commotion among a flock of eight. One evidently was in great disfavor with the others, for, with angry and excited cawings, they were striking at him in a most unfriendly manner. The strength of the persecuted bird was all but spent when I first sighted them, and when, perhaps two minutes later, the fleeing one sustained a particularly vicious onslaught, it began to fall. It did not descend gradually, like a bird injured while on the wing, but plunged downward like a falling rock a hundred feet or more into the top of a large pine-tree, and, bounding from limb to limb, struck the ground but a few yards from me. When I picked it up I found it to be quite dead.

Killing a
Comrade

When the pursuers saw their victim fall their caws abruptly ceased, as if the birds were shocked at what they had done; and, turning, they departed silently and swiftly, all in different directions. I wonder if they were executioners performing a duty for the good of the clan? Perhaps they were only thugs, sandbagging a quiet and respectable citizen on his way home!

Birds are particularly subject to disease in winter, and many perish from affections of the throat and lungs. Crows are attacked at times by a malady called roup, and hundreds of the bodies of those that have died from it may sometimes be found on the ground beneath a roost. Wild birds have no doctor, who can come at the first signs of an epidemic and vaccinate them against its ravages.

Crows are among the earliest birds in spring to build their nests, and usually freshly laid eggs may be found during the first half of April. These eggs are bluish green, thickly marked with various shades of brown, so that they blend admirably with the canopy of green pine-needles among which the nest is so often placed. To climb to a Crow's nest is often quite an undertaking. Sometimes, it is true, the situation may be only thirty or forty feet from the ground, but I recall once climbing to a Crow's nest in Florida, which, by actual measurement with a cord, was ninety-one feet in air. The nests are heavy, compact structures, made of sticks and twigs, and lined with grapevine-bark, grass, and sometimes with moss. The old birds are usually very quiet when in the immediate neighborhood of their nest, and frequently the only evidence one will have of the fact that they are near him is seeing a Crow fly swiftly and noiselessly away among the tree-tops.

Nest and
Eggs

For hundreds of years farmers have regarded the Crow as one of their most annoying enemies. This is chiefly because the Crows dearly love to

pull up corn shortly after it has sprouted. They do this to get the grain of seed-corn, which has become softened by contact with the soft earth. Then, too, as the grain begins to germinate, the starch it contains turns to sugar, and thus there is made a dainty tidbit which is quite to the liking of a hungry Crow. Very naturally, therefore, the farmer seeks to rid the neighborhood of these black-feathered visitors. Time and again he takes his gun and sallies forth; but no sooner does he enter the field where the birds are feeding than an old Crow, which has established himself as a sentinel on some tree or fence-stake, gives a warning 'caw' that all



A CROW BROODING UPON ITS NEST

of his friends understand, and in a moment the entire flock takes flight to the nearest woods, where they calmly await the departure of their disturber.

Now and then the farmer or his boy, by hiding among the trees or along a fence, succeeds in shooting a Crow. When this is accomplished, the bird's body is often tied to a pole, which is then set up in the field as a warning to the bird's fellows of the fate that awaits them if they persist in returning. A chorus of jeering *caws* is often the only answer the farmer gets for his trouble, for let no one ever forget that the Crow is about the smartest bird of which we have any knowledge. If he were not a bird of most unusual wisdom, his race would long since have passed away. Think of the hundreds of thousands of farmers who, through the centuries, have tried every possible means of destroying these birds! No law in any state protects them, and many

times bounties have been paid for their heads, thus offering a special inducement to men to kill them. Guns, traps, poison, and destruction of their nests have all alike been in vain, for the Crows live on in apparently undiminished numbers.

As a matter of fact, the Crow is not altogether a bad bird, and if he were understood better I have little doubt that he would have far more friends than foes. He eats a great many harmful insects, and in this way makes amends for his sins in the cornfield. Many beetles, Insect Food June-bugs, and other insects of a similar character, are eaten by Crows in great numbers during the spring and early summer. Some observers state that baby Crows are fed, to a very large degree, on this kind of diet. Crows like grasshoppers, especially in the spring, and annually consume large quantities of them. They eat also, among other objects, such queer foods as frogs, toads, and young turtles, and even small snakes find favor in their eyes. The wild fruit they take is mostly such as that of the dogwood and the sour gum. Sumac-berries of different kinds are eaten. In fact, the Crow will sample almost anything that looks as if it might be good to consume, such as frozen apples, pumpkins, turnips, potatoes, or any other fruit or vegetable that may be discarded and left to lie in the orchard or field. In cold, snowy weather, food sometimes becomes very scarce. On such occasions Crows will feast on any dead animal to be found, such as a horse or a cat. They sometimes go down to the shore and hunt for clams, crayfish, and the bodies of dead fish that have washed ashore. This practice, however, may more often be observed in the Fish Crow, a bird slightly smaller than our common Crow, and found chiefly along the sea-coast, and about the larger lakes and water-courses.

The Crow, in its various forms, has a wide distribution throughout North America; and there is hardly a boy or girl who does not know its cry, or who is not familiar with the sight of the big, black fellow flying over the fields or resting for a moment on the top of a tree by the roadside. It is undoubtedly the most common and best-known bird in the United States.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City

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Any person, club, school, or company in sympathy with the objects of this Association, may become a member of it and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

THE ANNUAL MEETING

The first session of the Tenth Annual Meeting of the National Association of Audubon Societies was held in the main lecture-hall of the American Museum of Natural History, in New York City, on the evening of October 26, 1914. An audience of several hundred persons was present.

The Secretary gave a brief summary of the Association's work the past year, and presented the speakers of the evening. Charles C. Gorst rendered a most unusual entertainment, which he called "The Musical Genius of Birds." His imitations of the calls, whistles, and songs of birds were very pleasing, and brought forth repeated applause. It is conservative to declare that Mr. Gorst is one of the most entertaining and accomplished imitators of bird-music that this country has produced.

Following this treat, William L. Finley, of Oregon, who for many years has been engaged as Field Agent for the Association on the Pacific Coast, gave an address, which was illustrated with moving-pictures of more than usual interest. These pictures showed life-studies of Wilson's Snipe, the Western Grebe, and other water-birds, which delighted the audience. One reel was illustrative of the work of Junior Audubon Classes, showing children at work

making and erecting bird-houses, and feeding wild birds. The lesson it taught was strikingly impressive.

The business meeting, held at ten o'clock on the following morning, was well attended. In addition to the reports of the Secretary and Treasurer, the following Field Agents of the Association were present, and reported on work done in their respective fields of activity: Winthrop Packard, of Massachusetts; William L. Finley, of Oregon; Dr. Eugene Swope, of Ohio; Arthur H. Norton, of Maine; and Herbert K. Job, in charge of the new Department of Applied Ornithology. Through the instrumentality of Dr. Swope, there was brought to the attention of the meeting an offer by the Order of Moose to make an Audubon Sanctuary of the thousand-acre tract of land owned by that order in northern Illinois. This offer was accepted. Mrs. Mabel Osgood Wright, and Dr. Jonathan Dwight, Jr., whose terms of office as members of the Board of Directors expired in October, were unanimously reelected. The thirty members of the Advisory Board were also reelected.

The most enjoyable and gratifying incident connected with the Annual Meeting was the presence of William Dutcher, President of the Association. Since the

beginning of his illness, more than four years ago, he has been confined almost constantly to his home in Plainfield, New Jersey. It was therefore a great delight to all to see that he had so far recovered as to be able to meet with us on this occasion. Mr. Dutcher attended both sessions, and also a subsequent meeting of the Board of

Directors. Although as yet he is unable to speak, it was perfectly apparent to those present that he thoroughly understood all that was going on. The brightness of his face, and the animation of his frequent gestures, indicated clearly his great happiness at being once more among his Audubon Society friends.

PHOTOGRAPHING BIRDS' NESTS

By OSCAR E. BAYNARD

Illustrated from photographs by the writer

One of the phases of bird-study which the Audubon Society encourages, and which has long appealed to me, is that of photographing the nests of wild birds. When this is done with care there need be no evil

Wilson's Plover

The Wilson's Plover, or Stuttering-Bird, as it is sometimes called locally, is the most common of our summer beach-birds



A NEST OF WILSON'S PLOVER

results to the birds, and the pictures obtained are often very interesting.

With this article I present photographs which I have secured of some of the more unusual species of Florida birds, that I have had the good fortune to find.

in southern Florida. A few remain here all winter, but become most numerous on the beaches in the latter part of March. I have found fresh eggs as early as April 2, and as late as July 10. These plovers build no nests—just hollow out a place

in the beach a few yards above high-water mark, and lay three, rarely four, beautiful greenish-gray eggs, spotted, blotched, and lined with blackish brown and light lavender. Early in June of this year I was camping on a small sandy key, about a hundred yards wide, between the Gulf of Mexico and a bay. The plovers were nesting on a bank of white sand that had been thrown up by steam dredges a few years before on the bay side, probably half a mile long, and barely a foot above the high-water line. I estimated that at least fifty pairs nested there.

In walking along the beach, I found about thirty nests in two days, photographed several of them, and took one set of eggs under the scientific permit issued by the state. The next morning I found that one egg had hatched out and another pipped. I immediately took the young bird, the two remaining eggs, and my camera, and rowed back to the sand-spit, to try to locate the depression in the sand from which I had taken them; but after an hour's work I had to give it up—all places looked alike. I noted, however, one nest, placed in the broken end of a plank, that on the previous day had had two eggs and now had three, so that I knew it was a fresh set. I took these eggs and placed the young bird and my two eggs in their place, and then moved off and sat down to watch developments. In a few minutes the mother-bird ran up to the nest, looked hard at the young bird, which had run off about two feet from the eggs, circled the nest several times, and then squatted down on the two eggs and begun calling softly to the young bird. In a few minutes he crept up to the old bird. She looked him over for fully two minutes, then decided to adopt him, raked him under her out of the sun, and settled down as contentedly as if the family were really her own. I sat there for a full hour, and went back to camp a very surprised and happy fellow. This appeared to me to be a very unusual proceeding, but if she was satisfied, certainly I was.

Two days later, on my way back, I ran the boat close to the beach opposite this nest. The old bird ran off, and up

jumped three young and took off up the beach after her. The explanation of fresh eggs so late in the season is the fact that many eggs are washed away by high tides. I once found twenty eggs along the beach at the edge of the drift that had been washed away. This plover is an adept at tolling one from its eggs, playing the broken-wing act to a finish. But really get near the nest, and the bird's actions are very different; then it will run under your feet and beg so pitifully that it is hard to touch the eggs.

Gray Kingbird

* This tyrant flycatcher appears in southern Florida about the first week in April, but to find it one must go through the mangrove thickets that border the salt-water bays and inlets. Here, perched on some dead snag, the Gray Kingbird salutes one with his harsh note, closely resembling the note of the northern Kingbird. I usually hunt this bird from a canoe, as the nests are invariably in the mangroves that overhang the water. Paddling along the edge of these bushes, one will presently see an old bird perched on some dead snag, or on the topmost branch of some mangrove-bush, calling in his highest note. He will stay there and direct you to his nest, as he never perches very far from it. This is placed from four to fifteen feet above the water. The nest is woven of fine rootlets, and is lined with finer fibrous roots, and sometimes with horse-hair. It is frail, so that usually one can see the outlines of the eggs from beneath; yet it is stronger than it looks at a distance. The eggs have a deep creamy ground-color, beautifully spotted and wreathed with several shades of brown and lilac, and when fresh have a pinkish cast similar to a fresh Flicker's egg.

When camped on the key mentioned in the Wilson's Plover article, I spent a part of each day paddling along the mangroves on the bay side, and within a distance of four miles located twelve nests of the Gray Kingbird. These contained everything in the way of eggs and birds, from fresh eggs to fledglings nearly ready to fly. This was



NEST OF THE GRAY KINGBIRD IN A MANGROVE



NEST OF THE BLACK-WHISKERED VIREO IN A MANGROVE

the first week in June. I took notes on one nest that had fresh eggs, and found it took fifteen days for them to hatch. I have found the old birds wandering off into the pine-woods after the nesting season, but never more than a mile or two from the salt water.

Black-Whiskered Vireo

I have looked for the nest of this bird for several years. Early last June, while on a hunt for Gray Kingbirds, I was paddling along the edge of the mangroves when I heard the note of a Vireo. At first it sounded like the Red-eyed, but on listening closer I placed it as the Black-whiskered. I stopped the boat, waited a few minutes, and presently located the author in the top of a mangrove ten feet ahead of me. I paddled on softly until I was directly under it, and there before my eyes, about five feet above the water, was the nest, with the female sitting on it and looking

at me. It was not over two feet from my face, yet she stayed on the nest until I put forth my hand to touch her. The nest was empty, but evidently completed. I was happy, as it does one good to find something as uncommon as the nest of this bird, and for the first time. On my way back from the two-hours' paddle, I again looked in the nest, and found one egg, pinkish white, and speckled sparsely at the larger end with reddish brown. I visited this nest every day, but the bird laid an egg only every other day until she had three, then waited two whole days before beginning incubation. The nest was pensile, like all Vireos' nests, but not nearly so deep as most, and made entirely of dry seaweed, with a few pieces of palmetto fiber and one small feather woven in the side; it was lined nicely with fine, dry grass, and one or two pine-needles. I could stay there only a few days after the full set was laid. This nest was about twenty miles south of the bird's most



NEST AND EGGS OF THE SWALLOW-TAILED KITE



NEST AND EGGS OF THE EVERGLADE KITE

northern recorded breeding-range, for this Vireo is a West Indian species.

Swallow-tailed Kite

In Florida one must now go to the region of South Florida called the Big Cypress, to see much of this bird. It was once common all over the state, I believe, and I have seen it in north-central Florida, but only as an isolated pair. These beautiful bird's are called by the natives Forked-tailed Fish Hawks, I suppose because they are often found flying over the water. They will drink while on the wing, just like a Swallow. They catch their food on the wing also, and it is a treat to watch them feeding. I was out with a guide once, and expressed the wish to see the Kites at closer range. He said that was easy, and set fire to a cabbage-palmetto that had on it an abundance of dead vines and many dead fans. It was a quiet day and the smoke rose very high. In less than ten minutes six Kites were circling over the tree, catching wasps that had been routed

out by the fire; it made one nearly dizzy to watch the antics of the Kites in catching these insects. Unscrupulous hunters set fire to a palm so as to get a chance to shoot the Kites, as then they will swoop to within thirty feet of one after their prey. All the time they keep up a chattering that is very pleasant to hear.

Where you find one nest or pair of birds, there are likely to be two or three more in the same locality. One only has to climb to a nest to know within a few minutes the Kite-population of that "neck of woods," and the birds will fly in circles over the tree, ceaselessly chattering. They nest in pine trees nearly always, and usually pick out the slenderest one to be found, saddling their nests out near the end of a limb. The nest is built of dry sticks, strands of long moss (*Tillandsia*), and of a dry, silky moss from the dead cypresses. The eggs are usually two, rarely three, white or sometimes buffy, spotted and blotched with brown and chestnut-brown markings, chiefly around the larger end. From March 25 to April 15 is the time in Florida to find

fresh eggs; but, in 1913, Mr. Phelps found eggs on March 17. This Kite likes the broad open spaces adjacent to the cypress swamps, and in the breeding-season one will hardly find them anywhere else. This bird is decreasing in Florida.

Everglade Kite

As its name signifies, this Kite is a bird of the everglade region of southern Florida, and in northern Florida is a migrant only. It is known to the Indians and to local hunters as Snail Hawk, referring to its habit of feeding on a species of fresh-water snail. The Everglade Kite will sail over the water like a Gull, suddenly dive down, seize a snail, carry it to the nearest perch, and extract the snail without breaking the shell. I have found piles of these shells at the base of some old post at the edge of the water—in some instances as many as would fill a bushel-basket. The Kites arrive in southern Florida early in February, and eggs have been found from March 1 until May. Usually two, three, or four pairs breed close together, that is, within a radius of a mile. I have discovered most of my nests in the saw-grass region in small willow-bushes, and they are somewhat hard to find.

I once spent more than eight hours in looking for a nest. I climbed a tree at the edge of the saw-grass, and located the bird at her nest in a small willow-bush in the grass, probably a quarter of a mile away. I noted the direction with my compass and getting in my canoe started by the compass to find the spot. The grass was five feet or more higher than my head as I sat in the canoe, and the water was too deep to wade. It is a difficult feat to go in any certain direction in this saw-grass, as it closes up immediately behind the canoe, and one seems to be lost all the time. I paddled as far as I thought was necessary, then stood up and tried to look around, but was hardly able to see fifteen feet from the canoe. So I went back along my trail to the tree and took new bearings, then into the saw-grass again, with the same result. I kept this up for eight long weary hours,

and when I really did find the nest, it was right over my head before I saw it.

The finding of the beautiful set of four eggs pictured here was ample reward for my strenuous efforts. I have heard of other nests on the edge of lakes, where they could be reached from a boat easily, but I never found them so easy to get at. The late date of this set was owing probably to its being the second laying, the first having been broken up; and the bird decided to go so far back that nothing could find her. This species is undoubtedly becoming very rare in Florida, and it is only a question of a few years when the Everglade Kite will be no more here. This will not mean an extermination of the species, as they nest in large colonies in South America.

Florida Turkey

There is usually more luck than good management in finding a Wild Turkey's nest. One must have a good idea of the Turkey-range, the kind of places the birds like to nest in, and an unlimited amount of patience; and even then, if he is not lucky, he will fail. The Wild Turkey is still fairly abundant in certain parts of Florida, and if our new game-laws are thoroughly enforced there is no reason why the bird should not hold its own, even with the great amount of hunting that is done each year. The Turkey is essentially a bird of the wild places, and is without doubt the slyest of all wild birds. I have seen them in close proximity to farms in a fairly populated section, but this is the exception.

My records show that I have found thirty Turkey's nests in the last ten years, and they have been in all kinds of situations. The Turkeys in the northern and central parts of Florida usually use a thicket of greenbriers that has a thick layer of dry leaves underneath it, in which they will hollow out a slight depression in the ground, line it with dry grass and leaves, and sometimes add a few feathers. When they are incubating, they depend to a great extent on their protective color-

ation, and will not flush easily. I once stood for fully five minutes within twenty inches of a Turkey-hen on her nest while I was watching a Pileated Woodpecker. Happening to glance down into a thicket of greenbriers, I spied the beady eye of the hen; and away she slid as quietly as a snake, disclosing twelve beautiful eggs. I

Turkey hens together in the Big Cypress country a few days after the hunting season closed. They were feeding along a cypress head in a "burn," and were strung out one behind the other; and the bright morning sun glistening on their plumage made a picture I shall long remember. On the same day I saw a drove



NEST AND EGGS OF THE FLORIDA WILD TURKEY

have found sets of sixteen eggs, but nine or ten is the usual number, and, for a young hen, six and seven is the size of the set. Down in the Everglade region the Turkey usually builds in a thick clump of saw-palmetto bushes, and makes her nest of dry grass and leaves; and I found them on the ground under the top of a fallen pine when there was a good thicket of grass around it. I once saw twenty-three

of nine Turkey-gobblers feeding in a similar place further along. Such flocks as this are not unusual when the Turkey is plentiful. I camped at a man's homestead down on the edge of the Okaloacoochee Slough for a few days once in late March; and every morning and evening nine hens came into his cultivated field to feed, and did not seem to mind us if we did not go too close to them.



THE BIGHORNS OF MT. SNEFFELS ON THEIR NATIVE HEATH
Copyrighted photograph by F. A. Rice

TAMING WILD BIGHORNS

A very delightful example of how the shyest wild animals may be taught to trust mankind, and will yield their fears under the influences of continuous kindness and a sense of security, is afforded by the bighorn sheep that every winter come down into the town of Ouray to get food.

Mountain sheep have become so rare that it has become necessary to prohibit

fifteen or twenty in all, and were again fed as long as they cared to remain. The third year they came in larger numbers and earlier, seeming to prefer the easily obtained alfalfa hay to the harder fare of the hills. Last winter (1913-14) they first appeared in December, and others during January and February, until about seventy-five were fed daily, the state providing the feed under the supervision of the local



A FLOCK OF MOUNTAIN SHEEP ON THE HILLSIDE NEAR OURAY

Copyrighted photograph by F. A. Rice

by law all killing in Colorado. They seem to know this, and of late years have been venturing nearer to Ouray every winter. In 1910 eight old bucks came down to the edge of the town in March, and the townspeople tried the experiment of placing hay where the sheep could get it. They stayed there until the middle of April, when the snow began to melt in the hills, and they returned to their range. In February of the next year some of these bucks came again, and brought with them a few does,

game warden. A few stayed in town until early June, but the majority moved up the hillside as fast as the snow melted. Our forest ranger says there are about 250 sheep in this vicinity, so that only a small proportion of the flock visits Ouray.

The sheep range in the mountains (Sneffels Range) west of Ouray. During the summer they are to be found high above timber-line, which has an altitude of about 11,500 feet in this range. There they are very shy and difficult to approach,

which contrasts sharply with their conduct in midwinter.

The tracks of the Denver & Rio Grande Railroad enter Ouray along the base of these western hills, and, as the easiest way for the sheep to come down the mountain is in that neighborhood, they are fed within 100 feet of the station; and they soon cease to be disturbed by the trains. Last spring was the first time

they ever crossed the tracks; but, having once made the venture, it was not long until they began to make short excursions up the streets, and by the time spring came they were daily going half-way to the center of town. Our people are very proud of these visitors; and, even were they not protected by law, public sentiment would make it very unpleasant for anyone who molested them.



A TAME FAMILY OF BIGHORNS ON THEIR FEEDING-GROUND AT OURAY
Copyrighted photograph by F. A. Rice

A SUGGESTION FOR CHRISTMAS

Instead of sending to your young friends more or less meaningless Christmas or Easter cards, why not, as good bird-lovers, use as your tokens of remembrance one or more of the beautiful colored portraits of birds issued by the National Association in their Educational Leaflets. Every child loves pictures of real animals—will treasure such a mark of attention far more than an ordinary “card,” because it will mean something to him. One might imagine a generous person giving himself

the joy of distributing dozens of these among the eager youngsters of his neighborhood.

They will not only please a young child by their beauty, and by the fun of coloring the accompanying outlines, but will enable the older ones to learn the names of the birds seen daily about the house. As a more substantial present the bound volume of the first fifty-nine Leaflets is available, containing more than sixty pictures.

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REPORT OF THE SECRETARY

INTRODUCTION

Never have I undertaken the preparation of an Annual Report of the National Association of Audubon Societies without realizing the great difficulty of adequately conveying in words a correct idea of the true scope of its activities, or a proper appreciation of the zeal and sympathy of the hundreds of volunteer Audubon workers throughout the country. Brief statements and figures may serve to show the extent of its present business organization, but can convey only a scant indication of the tremendous amount of human feeling with which the entire organization throbs.

The influence of the Audubon movement throughout the United States today is astounding, especially when one considers the comparatively limited expenditure of funds in the course of a year. It is a work of the people, including bird-lovers and wild-animal conservationists of every type, and new fields of opportunity are continually opening before us. The past year has been marked by a steady maintenance of our more important fields of effort, by distinct gains in many directions, and with loss nowhere along the line.

AUDUBON WARDEN WORK

The chief nursery of the sea-birds of the Atlantic Coast of the United States is among the islands off the coast of Maine. During the past summer,

thirty-five of these islands have been occupied by breeding colonies, not including several small ledges, where scattering pairs overflowing from near-by colonies gather to nest. The Association has continued to exercise a guardianship, as usual, over these birds, to protect them as far as possible from eggers, and from possible raids of Indians, who annually sell Gulls' wings in the towns of Nova Scotia.

In addition to those watching the Maine colonies, the Association's line of wardens extends southward along the coast, stationed at various places in Massachusetts, New York, and New Jersey. Three others are stationed in Florida, and two in Louisiana. These latter are employed jointly with the Government to guard some of the Federal bird-reservations of that southern territory. Colonies of birds at various points inland, notably on Moosehead Lake, Maine, and in Lake Michigan, are protected in like manner.

The wardens make many reports of their work, and, in addition, we frequently receive special reports from ornithologists who visit these regions. It is, of course, highly interesting to note the extent of bird-life found in these great bird-communities, and to observe how far the Association is successful in protecting the feathered inhabitants from their human enemies, in order that they may have normal increase from year to year.

When the colonies are small, it is possible to determine with accuracy the extent of the bird-population. Where, however, many thousands of birds assemble on one of these rookery islands, any account given of their numbers must be more or less in the form of an estimate. For several years the Secretary has made it a point each season to visit a few, at least, of the guarded colonies. From observations made on these occasions, he feels justified in saying that the report showing the numbers of breeding-birds here submitted is very conservative.

In the fourteen colonies of Herring Gulls protected during the past summer, it is estimated that there were 59,420 adult birds inhabiting the islands; in the eleven colonies of Common and Arctic Terns, 50,240; and in five colonies of Black Guillemots, 1,540. Among the other more numerous species, we may mention Least Terns, 9,550; Forster's Terns, 5,225; Royal Terns, 17,500; Cabot's Terns, 3,800; Clapper Rails, 5,000; Puffins, 600; Eider Ducks, 100; Leach's Petrels, 5,000; Laughing Gulls, 118,400; Mergansers, 200; Pelicans, 4,500; Ospreys, 200; Louisiana Herons, 25,700; Black-crowned Night Herons, 3,000; and Black Skimmers, 15,500, in addition to large numbers of Willets, Caspian Terns, Spotted Sandpipers, and Wilson's Plovers.

The enumeration above does not include, of course, many thousands of land-birds, which, in these isolated spots, are apparently in no special danger of human disturbance; nor does it include the tens of thousands of Wild Ducks that in certain seasons of the year are found on some of the guarded reservations.

The income from the Mary Dutcher Memorial Fund has been expended

the past year in protecting these birds, in which President Dutcher has long taken so warm and personal an interest.

EGRET PROTECTION

Quite aside from this general warden work, is our special effort for the protection of Egrets, on behalf of which sixteen guards were employed during the past spring and summer. These colonies are situated in South Carolina, Georgia, and Florida. Egrets, today, are not sufficiently abundant to cause much embarrassment in determining the numbers that inhabit any particular colony; especially has this been the case with those rookeries in Florida which have been personally visited by Oscar E. Baynard, our Supervising Warden for that state. During the past summer, Mr. Baynard spent many days struggling through these rookeries to count the occupied nests, and in doing so he was often forced to wade waist-deep in water infested with moccasins, alligators, and innumerable unpleasant insects, as the Secretary can testify, after having accompanied him on one of these expeditions.

In the eleven colonies of large Egrets protected, and carefully counted, we believe there were about 5,100 birds; while the count of Snowy Egrets, in thirteen colonies, was 2,375. With few exceptions, Egrets were found in rookeries inhabited by numerous other wading-birds. Counts and estimates of these show Black-crowned Night Herons, 1,055; Louisiana Herons, 6,200 (in addition to those being cared for by the general warden force, above referred to); Ward's Herons, 1,000; Green Herons, 800; Least Bitterns, 700; Water Turkeys, 2,922; Purple Gallinules, 1,500; Florida Gallinules, 2,000; Little Blue Herons, 7,076; White Ibis, 26,800; and Wood Ibis, 60,500.

It is with special pleasure that we record the presence, in our protected colonies, of 160 Limpkins and 147 Roseate Spoonbills, scattered through five rookeries; also three pairs of the now extremely rare Glossy Ibis. Other interesting birds that have had protection in these guarded nesting-groups are Wood Ducks, Great Blue Herons, Swallow-tailed Kites, King Rails, Boat-tailed Grackles, Florida Redwings, Yellow-crowned Night Herons, and Florida Dusky Ducks.

Many of the estimates given above, particularly those in reference to the Wood Ibis, the Little Blue, and the Louisiana Herons, are far beneath the true figures. I believe it very conservative to state that about 550,000 water-birds of various kinds received admirable protection from their human enemies during the nesting season of 1914, as a result of the watchful efforts of this Association.

JUNIOR AUDUBON CLASSES

The greatest reward of the conscientious teacher is to watch the minds of her pupils unfold and develop under her guidance. Some suggestion of this is

the sensation which those of us feel who have been instrumental in preparing for the rapid growth of the Junior Audubon Movement.

Last year it was reported in these pages that 52,000 children were enrolled in these classes. The school-year which closed July 1, 1914, revealed the fact that the growth this year had shown an increase of over one hundred per cent. In the Southern States, 19,121 children joined as Junior Members, and in the North, 95,918; making a grand total for the year of 115,039 enrolled. Think



THE RARE GLOSSY IBIS, IN THE AUDUBON SANCTUARY AT ORANGE
LAKE, FLORIDA

Photographed by Oscar E. Baynard

what an army of young bird-students is recruited each year; for every one of these thousands has systematically studied the habits and activities of at least ten birds, has made colored drawings of them, and has worn the Audubon Button, as well as receiving instruction in the building of bird-nesting boxes and the feeding of birds in winter.

Two persons are responsible for all this, and without their support practically nothing in this line would be accomplished. One is Mrs. Russell Sage, whose generous gift of \$5,000 a year makes possible the work in the South; and the other is a good friend of the birds and of the children, who last year provided \$14,000 for extending this effort in the other states of the Union. I regret that we are forbidden to mention the name of this benefactor. This

work will go steadily forward the coming year, for Mrs. Sage has renewed her subscription, and our generous, unnamed patron has already subscribed \$20,000 for the Junior work in the North.

The amount of labor devolving upon the office force in placing this subject before the teachers of the country, and later in supplying the teachers and pupils with leaflets, pictures, and buttons, can be guessed only by those who have visited the offices of the Association. In this Junior endeavor, we have, during the past year, enjoyed, as heretofore, the hearty coöperation of many of the State Societies, especially those of Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Ohio, and Florida.

LEGISLATION

Few states held legislative sessions during the year of 1914. In Massachusetts, the usual attempts were made to modify adversely the laws protecting birds and game. The Audubon workers of that state, assisted by others similarly interested, successfully withstood these onslaughts, and took the initiative in endeavoring to secure certain additional restrictions much needed.

In Virginia, we aided the State Society in its renewed efforts to secure the establishment of a State Game Commission. A very heavy campaign for the support of the proposed measure was waged throughout the state, but once more the legislature went on record, by a narrow margin, as being opposed to a modern state game-warden system.

A wide campaign of more than usual intensity has been waged in California during the past summer and autumn to defeat the efforts of the market-men, who were seeking to secure the repeal of the law which prohibits the sale of wild-fowl. It has been a great pleasure to your Board to be able to contribute to the expenses of our associates in this work.

We have also contributed financially to the strenuous efforts being made by our English friends to secure an act of Parliament prohibiting the importation of feathers. The unfortunate war now raging put this work at an end for the present, when victory was almost in sight.

We were particularly engrossed, for some weeks early in the year, in helping to bring before Congress the necessity of appropriating not less than \$50,000 for the use of the Department of Agriculture, in enforcing the regulations established under the Federal Migratory-Bird Law. Our joy at the successful outcome of these efforts on our part, and on the part of others, was much dampened later, when, as a result of political pressure, those representatives of the Department of Agriculture empowered to make restrictive regulations regarding the killing of birds deemed it necessary to recede in many points from the stand previously taken. Especially do we deplore the action by which all Federal protection was removed from Bobolinks in the states of Delaware, New Jersey and Pennsylvania, thus giving the Govern-

ment's stamp of approval to the slaughter of these beautiful song-birds during an open season in these states. This Association protested most earnestly against what we regard as an unwarranted and unnecessary concession to the destroyers of bird-life; and we shall not rest content until Bobolinks are accorded the complete Federal protection they so justly deserve.

FIELD AGENTS

The Board employed five field agents and lecturers during the past year for a part or all of their time. Miss Katherine H. Stuart, of Virginia, has continued her active and resourceful efforts, and the cause of the birds has been championed by her in every nook and corner of the Old Dominion. Winthrop Packard has divided his time between his duties as field agent and lecturer for the National Association and his duties as Secretary of the Massachusetts Audubon Society.

Dr. Eugene Swope has done yeoman service not only in his home state, Ohio, but traveled for four months in Florida, where he lectured in every town and city of any importance.

William L. Finley, of Oregon, and Arthur H. Norton, of Maine, have been as active in the interests of the Association as their other duties would admit.

Edward H. Forbush, although he resigned last year as an active agent of the Association, has nevertheless continued in the capacity of an honorary supervising Audubon agent for New England.

Details of the work of these representatives of the Association will be presented more fully by them in their reports, printed elsewhere in these pages.

A NEW DEPARTMENT

Of late there has been growing rapidly a demand for exact information regarding the best methods of attracting birds about the home and on the farm, as well as incessant calls for information as to proper means to be employed in rearing Ducks, Geese, Pheasants, and other wild game-birds by artificial means. The Directors felt that it would be well for the Association to meet the needs called for by this new demand by employing someone to give all his time to collecting such information, and to carrying it to the public by means of lectures and bulletins. Mr. Herbert K. Job, well known as a lecturer and author, who has for some time occupied the office of State Ornithologist of Connecticut, was chosen for this undertaking, and began his duties on August 1, 1914.

The Department of Applied Ornithology we expect to develop rapidly, and shall hope from time to time to be able to report marked progress.

STATE SOCIETIES

We would especially commend the reports of the various State Audubon Societies throughout the Union, which will be found on subsequent pages of this Report. The earnest, self-sacrificing labor of the officers and members of many of these bodies deserves the highest praise, and the reports will be found to contain much of interest and stimulus. One of the many advances recently made in State Audubon Society work was in New Jersey, when last January it was decided to employ the Secretary, Beecher S. Bowdish, for his entire time. Mr. Bowdish thereupon left the office of the National Association, where he had been for several years, and assumed the duties of the enlarged New Jersey work.

The Birdcraft Sanctuary of the Connecticut Audubon Society, established the past year at Fairfield, is not only a splendid undertaking for the birds, but is a most delicate and worthy compliment to the President of the Audubon Society of that state, Mrs. Mabel Osgood Wright.

PUBLICATIONS

During the year, the Association has published, first in BIRD-LORE, and later as separates, six Educational Leaflets, accompanied by colored plates of the birds treated. These were Leaflets No. 71, Tufted Titmouse, by Florence Merriam Bailey; No. 72, Wood Thrush, and No. 73, Whip-poor-will, by T. Gilbert Pearson; No. 74, Roseate Spoonbill, by Dr. Frank M. Chapman; No. 75, Sora Rail, by Edward H. Forbush; and No. 76, Pintailed Duck, by Herbert K. Job.

We have also brought out Bulletin No. 1, entitled Attracting Birds about the Home. This is illustrated with forty-one half-tone pictures and line-drawings. One edition of 10,000 has been printed. An illustrated book on Alaskan Bird Life, for free distribution to the eight thousand school-children of Alaska, has been completed, and will probably be ready for distribution by December 1. The entire cost of this undertaking has been borne by one of our most public-spirited members, whose name we are not permitted to give at this time.

Within the year we have issued, for the various uses of the Association, the following: Printed and mimeographed letters, 123,000; letterheads, 60,000; record-blanks and labels, 99,000; four-paged announcements to teachers, 93,000; Bulletin No. 1, 10,000; circulars and printed notices of various kinds, 251,000; outline drawings of birds, 1,619,000; colored pictures of birds, 2,078,000; and Educational Leaflets, 2,358,000.

The volume of correspondence has continued to grow steadily. The office is, today, a general clearing-house for all imaginable kinds of knowledge. We are called upon to give detailed information on a wide variety of subjects, from the best method of starting a bird-reservation, or the drafting of a state game-

law, to the easiest way of dyeing an old ostrich feather or the most humane manner of disposing of a bird-eating cat.

During the year more than 70,000 letters were received at the office. In the handling of this voluminous correspondence, the Secretary would especially mention the very great assistance he receives from Ernest Ingersoll, writer, critic, and experienced office-manager, who now has the direct oversight of our office force.

FINANCIAL

Fifty-seven new Life Members were enrolled during the year. The \$5,700 received from this source, together with the bequest of \$3,000 from the estate of our lamented member, Elizabeth Drummond, were added to the General Endowment Fund of the Association. The sustaining membership has been increased from 2,336 to 2,462. The income for current expenses for the year exceeded \$81,000 which, together with the additions made to the endowment fund, shows the total of money actually received by the Association during the year to be more than \$89,000, or about \$8,000 more than the total of last year.

Satisfying as these figures might possibly appear to some, the fact remains that our income is woefully inadequate to meet the enormous demands made upon the Association for support in many useful fields. A large amount of the Secretary's energy and thought is necessarily directed to devising ways and means of keeping up and increasing the financial support, upon which foundation, of course, our whole work must rest.

In conclusion, the officers and directors would take this opportunity to express their appreciation to all the thousands of good people of our country who, either by personal effort or by the giving of funds, in any way have aided in achieving the success of this great Audubon movement for the study and preservation of our wild birds and animals. The continually increasing growth of the united Audubon Societies of America bears splendid testimony to the wisdom and foresight of our great and good founder, William Dutcher.

T. GILBERT PEARSON, *Secretary*.

REPORTS OF FIELD AGENTS

REPORT OF ARTHUR H. NORTON, FIELD AGENT
FOR MAINE

The demand for lectures on birds, particularly illustrated ones, by granges, schools, clubs, and other organizations has been extensive, and has been met, so far as possible, by the National Field Agent for the state, and by local Audubon secretaries. To facilitate illustration, numerous lantern-slides have been made, chiefly from local photographs of birds and their haunts, and additional negatives are in process of collection.

A small selection of skins of birds from the agent's private collection is loaned to local clubs, with the request that, whenever exhibited, a plea be made that members of the audience feed the birds in winter. Suggestions as to methods are furnished, and instructions given for planting fruit-bearing trees and shrubs, with a view to attracting birds and providing them with food. Reports from several private estates show that means for attracting birds, both in summer and winter, have met with most gratifying results.

Early in the season, a circular on feeding birds in winter was prepared, and later, upon telegraphic instructions from National Secretary T. Gilbert Pearson an abstract was distributed to every newspaper in the state, with a letter requesting its publication. The response was most gratifying. The press in Maine, indeed, has given hearty support to every attempt to give better protection to our birds.

The alarming increase and spread, in Maine, during recent years, of two imported insect-pests, the gypsy and brown-tailed moths, have resulted in the cutting of much oak and wild cherry along highways and hedge-rows, thus removing a source of food for many birds. This, of itself, is not serious in so well-wooded a state; but the alarm has resulted in cleaner orcharding, which has been carried out so vigorously that birds in the habit of nesting in cavities have been deprived of summer homes in many instances. It is to be regretted that many "progressive farmers" are so imbued with the so-called "Yankee spirit of thrift" that, in their efforts to make their properties yield an immediate income, they have failed to think of, or have lost sight of, or never have heard of, the great factor of the bird-population of the farm. Every tree and shrub whose use is not visible at the moment goes to the furnace, the naked barbed-wire fence takes the place of the old hedge-row, and a host of birds are deprived of cover, food, and attractive nesting-places.

The past year witnessed the growth of an effort to set aside a large part of the island of Mt. Desert as a natural preserve for native wild animals and plants. Citizens of the town of Scarborough petitioned the State Commissioners of Island Fisheries and Game to set apart Prout's Neck, comprising an area of 112 acres, in which shooting and hunting shall be prohibited. After



Arthur H. Norton

ARTHUR H. NORTON
FIELD AGENT FOR MAINE

a public hearing, the Commissioners issued regulations on September 3, 1914, closing the area for four years. This is especially noteworthy as marking a new action in this state, and beginning a movement which undoubtedly will increase in popularity.

SPECIAL INSPECTIONS

Following instructions, inspections were made by the writer at Bald Rock and at Bald Porcupine Island, near Bar Harbor. On August 24 visits were made to numerous small islands and ledges in upper Penobscot Bay, on August 26 in Muscongus Bay and at Monhegan. The general results are here given, arranged according to species of birds inspected. The colonies in Penobscot Bay, though small, are important in the aggregate, and are so situated that one or two wardens could have oversight of them all. Besides the Gulls, Terns, and Fish Hawks reported, colonies of Night Herons and of Great Blue Herons exist in the same vicinity, not included in this report.

Leach's Petrel.—Petrels were found at Eastern Egg Rock, Muscongus Bay, but none was detected on Western Rock, where Petrels were formerly common. At Eastern Rock a few burrows had been opened by curious persons. The indications were those of a good-sized colony.

Great Black-backed Gull.—Though no Black-backed Gulls are known to breed in Maine at present, they have responded to the protection afforded all birds, and many spend the summer at the outermost islands. Flocks of considerable size were seen on the upper parts of Brimstone and Otter Islands.

Herring Gulls.—So far as Penobscot Bay proper is concerned, formerly the Gulls bred only at Brimstone and Otter Islands, southeast of Fox Island; but all left these islands prior to 1904, and, it was believed, went to No-Man's-Land. The inspection, this year, showed none breeding at Brimstone or Otter Islands, although both Herring and Black-backed Gulls used both of the Islands as resting-places. They have, however, begun nesting farther up the bay, northeast of Fox Island, and in the Islesboro region, where neither has been known to breed before. The following colonies were found: Mouse Island, one pair; Spoon Ledge, 150 birds; Compass Island, 50 birds; Sloop Island, 200 birds; Bald Island, 500 birds. Excepting Mouse Island, all these islands are near each other and northeast of Fox Island. Young Gulls had been raised at all of the places named, and were just beginning (Aug. 26) to take short flights over the water. The breeding-season seems to have been rather later than usual, and some young were still in the downy stages. None of these birds was found breeding west of this bay, although everywhere along the coast many adult Gulls pass the summer, and spend their abundant leisure on rocky shores and ledges. At the summer-resorts and fishing-ports they are entirely fearless.

Laughing Gulls.—A small colony of Laughing Gulls persists in Muscongus Bay. They have been driven from Western to Eastern Egg Rock, where

they succeeded in raising a number of young this year. On August 26 I saw no less than a dozen young, all on the wing and strong, and saw one as far away as Monhegan. This season seems to have been successful.

Terns.—No distinction is made between Common and Arctic Terns, as in many places they are hopelessly mingled in the gyrating masses, yet in the region inspected they were chiefly of the Common species. In Penobscot Bay, colonies were found at the following places: Robinson Rock (Islesboro Group), outer 150, and inner 50 birds; Mouse Island, 150 birds; Egg Rock (Fox Island Group) 100 birds. At Sloop Island, many Terns were resting and flying about the island as if breeding, but no nests or young were found, and it should be noted that the place was occupied by Herring Gulls. Young Terns were on the wing at sea; yet at nearly all of the places visited young in all stages of growth were found. No mortality was detected in Penobscot Bay. The birds at most of the places were wild.

In Muscongus Bay, Terns were found only on Eastern Egg Rock, where a considerable mortality of young was found, but the cause could not be determined. The dead young were fledged, yet many seemed too small to have flown, and apparently were not shot. They were scattered over the island, in open spots, on rocks and on chickweed beds, as if seeking the sun. In Casco Bay a house had been built on Outer Green Island and occupied by a fisherman; as a result, most of the Terns left the island, and an unusual number appeared on Lower Mark Island. The Bluff Island colony continued throughout the season, apparently as large as usual.

Black-crowned Night Heron.—Two visits were made to a large colony of Herons in Scarborough, and the conditions were most gratifying; no signs of molestation were detected. On the first visit (May 15), the birds were in the midst of laying, from one to three eggs being found in every nest. On the second visit (June 19), the young were abundant and noisy.

Osprey.—Formerly Fish Hawks bred not uncommonly from Portland Harbor eastward; but their great nests have been robbed and tumbled to earth, and some of the birds have been shot. They have gradually been restricted in this range, few, if any, breeding between Portland and the Kennebec River. They were formerly numerous throughout Penobscot Bay, and it is gratifying to be able to state that they are not rare there at present. More Fish Hawks are clustered about the Fox and Deer Island groups than elsewhere in Maine. On several of the islets and ledges northeast of North Haven, they place their nests on the ground, or on rocks, as well as in trees.

REPORT OF WINTHROP PACKARD, FIELD AGENT FOR MASSACHUSETTS

The work of your Field Agent during the past year has been varied and interesting, and has overflowed the borders of the state. In Massachusetts, the usual vigorous attempt was made to extend the open season on wildfowl, giving back to the gunners a part of their old-time spring shooting. This bill was killed by vigilant efforts and the aid of many affiliated societies. Another bill, which purported to make the state's open season conform with that of the Federal regulations, was killed, as it contained a "joker"—a little phrase which would have completely broken down the state laws for preserving game, had it passed. A bill for a codification of the game-laws of the state was earnestly supported, but failed of passage. The most picturesque attempt at legislation was that which provided that only licensed cats should be kept alive in the state. This bill was taken seriously by the House for the first time, and would undoubtedly have gone to the Senate had not a self-seeking legislator offered an amendment giving farmers the right to keep a certain number of cats without a license-fee. This foolish amendment killed the bill.

During the intense cold and deep snow of last winter, a general request was sent out through the State Society, urging the people to feed wild birds, and giving careful directions how to do so. The response was immediate and generous.

Two very important bird-days were held during the summer by the State Grange. Large audiences were addressed by your agents at these gatherings, and there was an exhibition of bird-protection appliances. The convention of Grange Lecturers at Amherst was attended and addressed; also the annual meeting of the Laurel Hill Association, at Stockbridge, where an exhibition of bird-protection literature and appliances was made.

Your Field Agent has maintained, during October, in connection with the Massachusetts State Society, a large exhibition at the annual food fair in Mechanics' Building, Boston. It is reckoned that the attendance at this fair will be half a million persons. On Columbus Day, October 12, 61,000 persons visited the building, and apparently everyone of them asked questions at the Audubon Society's booth.

During the year, your Field Agent has delivered over forty lectures to audiences aggregating 7,800, an average attendance of 190.

An important part of the work has been that of raising funds for the National Association, and adding new members. Your agent feels that he has been especially fortunate this year in getting life-members for the Association, his total number to date being twenty-five, while his sustaining membership list shows 110. Your agent has also given every assistance possible to the State Society's Junior Class work.

In New Hampshire and Vermont, largely through the tact and energy of



Winthrop Packard —

WINTHROP PACKARD

FIELD AGENT FOR MASSACHUSETTS. AND SECRETARY-TREASURER OF THE MASSACHUSETTS SOCIETY

Mr. Forbush, the State Societies have been revived and assisted in getting upon a strong basis, as the reports of their secretaries show. The New Hampshire Society has been particularly successful. In Rhode Island splendid work has been done by the friends of bird-protection under the leadership of Harry S. Hathaway of Providence, as reported by Secretary Madison. Notable changes for the betterment of conditions in Rhode Island were the change in the state law to conform to the Federal regulations; the sale of Wild Ducks, Swans, Geese, and Rails, was prohibited; also snaring of any kind. A provision allowing the propagation and sale of Hungarian Partridges was repealed, thus preventing the sale of Ruffed Grouse picked. The bounty on Hawks, Crows, and Owls was repealed; protection was removed from the English Starling to the extent that a person may shoot the birds on his own land; and the Crow Blackbird was put upon the protected list. In this and other improvements your Field Agent has given such aid as he could.

It is good to be able to report an ever-increasing sentiment in favor of bird-protection. Restrictive laws come more easily now than ever before, and the sentiment in favor of their strict enforcement grows rapidly. Massachusetts is now in the throes of an open season on Pheasants, for the first time in many years. These birds have been fed everywhere, and in suburban communities have become as tame as chickens. On the first day of the open season 3,000 were slaughtered, to the dismay and distress of the people. As a result, the sentiment against an open season for these birds is very strong, and it is certain that more restrictions will be loudly called for throughout the state.

REPORT OF KATHARINE H. STUART, FIELD AGENT FOR VIRGINIA

As the years go by, there can be but little variation in the reports of your Field Agent. "Precept upon precept, line upon line, here a little and there a little," must characterize the most earnest efforts one can make in this educational work, especially in the South. Hence, results cannot be measured by these annual reports, nor can the vast and varied amount of work done be told in a small space.

The plan formulated by the National Association, under the Mrs. Russell Sage fund, to train the young through organized classes in the schools, and by giving instruction by leaflets, has been a great boon to Virginia, and the state-wide awakening in bird-protection is traceable to it. Hundreds of parents, all over the state, have told me that the joy of their boys and girls in the Junior Audubon Classes, and their bringing into the home the Educational Leaflets, had first aroused them to a sense of the importance of bird-conservation.

The month of September is given to planning my year's work, and the

amount of writing to school-superintendents, teachers, and others, asking for assistance in our efforts, is very great.

I find that very few Junior Classes are formed until after the Teachers' Conference, held late in November, and the larger part are organized in the spring, when nature-study is especially emphasized in the Virginia schools. I was invited to Williamsburg in the first week of October, and spoke for two days before a joint session of the Teachers' and Farmers' Conference of three districts in that part of the state. Superintendent Jones obtained the use of a moving-picture hall, and I gave afternoon and evening talks to farmers, school-children, college students, and the general public. I exhibited, on these occasions, the beautiful colored lantern-slides of birds issued by the National Association; slides loaned me by Chief Forester Graves, and those illustrating the life-history of several insects, made by Mrs. Slingerland and loaned to me by Dr. L. O. Howard, of the Department of Agriculture. These slides added a great deal of interest to my lectures, and I thank these gentlemen for their assistance. The hall was crowded.

As Chairman of the Bird Department of the Virginia Federation of Woman's Clubs, I attended the general conference, and offered a resolution that we send in a petition to the General Assembly of Virginia for the creation of a State Game Commissioner. This was unanimously agreed to, and circulars were printed and sent at once to our fifty-three clubs, to secure signatures, and to be returned by January 1. The committee was composed of Mrs. G. G. Temple, Danville; Mrs. William Engles, Radford; Miss Annie White, Lexington; Mrs. J. R. Pretty, Keysville; and Miss Katharine H. Stuart, Chairman. The club-women endorsed it, and worked hard throughout the state for the White-Hart bill. At the Teachers' Conference, held at the same time in Lynchburg, I spoke before the rural department, urging the teachers to organize Junior Clubs. On my return, I attended the conference of teachers, principals and superintendents, at Round Hill and Winchester. After my address, strong appeals were made by several of the principals present, urging the teachers to aid in this important work. I visited three of the state normal schools, and gave talks. In my trips through the state, at hotels and boarding-houses, I generally had a good chance to put in the hand of someone a leaflet, often to change the attitude of a chance acquaintance, who will carry the message to some distant state.

The annual meeting of the Virginia Audubon Society, held in Richmond in November, found many changes. The women of this state started this movement, and have conducted it up to the present time, under their Presidents, Mrs. Moses D. Hoge, and Mrs. William Harris, both prominent in social and literary circles in Richmond. M. D. Hart, of Ashland, who had been Treasurer since the organization of the society, was unanimously elected President, and Mrs. R. B. Smithey, also of Ashland, was chosen Secretary. We feel sure, therefore, that the future for Audubon work in Virginia, is

secure. I wrote at once for instructions and found that the work had been divided into departments, which will make it much easier. I attended the National Educational Congress and did some work of a national character, meeting many educators from all parts of the Union.

In January I went to southwestern Virginia to spend four weeks giving illustrated talks before schools, clubs, normal schools, and the general public. This is a growing and prosperous section of the state, and a new field for our Audubon work. In East Radford, Mr. Witt, Superintendent of Schools,



MISS KATHARINE H. STUART, FIELD AGENT FOR VIRGINIA, WITH COMPANIONS,
PREPARING TO PRESENT A PETITION TO THE VIRGINIA LEGISLATURE

obtained the use of a moving-picture hall, and I gave a course of daily talks. The Teachers' Conference of the Ninth and Tenth Districts was also in session, and I spoke on the importance of bird-protection and the need of a State Game Commissioner. In the morning, I gave an illustrated talk to the four or five hundred teachers present, using bird-skins, nests and eggs, insects, cocoons, etc. I carry these specimens in a case, which I call my "wonder box," and it is astonishing to see what pleasure these simple things give, not only to the children, but to the teachers as well, as they may be readily collected by any teacher, and used in her school-room to assist in quickening the minds of dull pupils, and to awaken an interest in nature-study. On this trip I visited East Radford, Radford, Christiansburg, Roanoke, Lynchburg, Charlottes-

ville, Culpeper, and many other places. A large number of Junior Classes were formed, and there was great enthusiasm among the children.

I was invited by Dr. Chandler, Superintendent of Schools, to visit the schools of Richmond in February, when I spoke to about 20,000 children. These meetings usually opened with a bird-song and a short address by the superintendent, followed by my talk of fifteen or twenty minutes. I find the General Assembly a good time to reach all the children, and it is not so laborious as visiting twelve to fifteen rooms in a day. I enjoyed the little lunches with the teachers, when we could discuss our work. Many teachers in Virginia are doing splendid work for the birds, but often cannot get the required number—ten—to pay the fee, so that the strength of bird-study cannot be gauged by the number of Junior Classes. This session we had 165 classes, with a membership of 3,000. From Richmond I went to Petersburg and was there the 22nd of February. It was not "blue-bird weather," for a heavy snow-storm raged, yet the children came in, marching and singing, and waving their flags. After being seated, I gave them a talk on our birds, emphasizing the remarkable history of the Eagle and the Dove as national emblems.

On my return to Richmond, I found that our committee had sent in the petitions of the Virginia Woman's Clubs, signed by prominent men and women all over the state, hundreds of business firms, banks, civic and patriotic organizations, farmers, and private individuals giving their signatures. The petitions were tied in packages with the club colors, blue and gold, and presented by the committee to Senator Blackburn Smith, of Berryville, who did such splendid work for the Robin petition. Just before we took it to the Senate, I had a picture taken of the two children who carried in the Robin petition, Norma Dietz and Merrywether Fry, as a souvenir of these two occasions. We were present when Senator Smith presented the petitions to the Legislature. One senator asked Mr. Smith how many farmers had signed that petition; he replied that he had not counted, them, but they were many. Our clubs extend all through the rural districts, and there was no difficulty in getting signatures from farmers, as all felt the need of the passage of the game bill, and it was a great blow to fail by so small a vote (only four votes more were needed to carry it); but we are hoping for better things in 1916. I went with Mr. Hart and Mrs. Smithey to call on the Governor, about Bird Day. He received us most graciously, asked for our literature, and, after a study of our work, he gave us a splendid proclamation for May 4, which we regard as a model for all states. Bird Day should be a national day, and I suggest that we urge the choice of the 4th of May, Audubon's Birthday. Such an anniversary would bring all bird-workers closer together. Governor Stuart's proclamation was emphasized in all summer schools, and we are hoping great results from these addresses. Bird Day was generally celebrated in the schools, and there is a growing interest in nature-study. The last Legislature gave the state a Forester, with headquarters at the University of Virginia, and an Arbor Day. This will give a

great chance for the boys to study bird-life and tree-life at the same time. I have given many talks on forestry before our schools, aided by lantern-slides; and our club-women have worked hard for this goal. Our children have put up hundreds of bird-boxes and feeding-tables all over the state, and the increase of our song and insectivorous birds is perceptible.

I close with two very interesting discoveries. That the founders of this great republic knew the value of birds and loved them, is shown from the fact that one finds at Monticello, the home of Jefferson, at Stratford, the home of the Lees, at Brandon, the home of the Harrisons, and in Williamsburg, and many other places, bird-boxes that in many instances are two hundred years old. Their shapes vary, and also their colors. I hope, in time, to get pictures and data that will reveal more of their history. It would be interesting to hear whether there are such ancient bird-homes anywhere north or south of Virginia, and I should like to get pictures of them.

The other discovery is that the first monument to birds was erected in Alexandria. It is not so lordly as the one recently erected to the Gulls in Salt Lake City, but is very simple, representing the last penny the Blytle family had to show their devotion to their "feathered brothers." The stone is about one yard square, and lies directly under a box-bush. On one side a place is left open, to put in all the birds found dead or that died in the home or yard of this family. The inscription reads thus: "In memory of the dear little loved ones; for here we have no continuing city, but seek one to come, whose builder and maker is God.—Hebrews 13-14." On the tomb of the head of the family was a marble bowl, kept full of water, and daily visits were made to the cemetery where food was placed for the birds. All of this family have passed away, but those who recall them tell of the number of wild birds they fed in their old garden, and how tenderly they cared for them all the time; and so we find that this humane work is quite old in historic Alexandria, and that the first bird-protective society was founded by the Blytle family many years before the National Association came into existence.

REPORT OF EUGENE SWOPE, FIELD AGENT FOR OHIO

All of the bright prospects foreseen at the time your Agent reported last year have been realized in Ohio, and much more besides. The progressive Audubon idea is permeating the state with a surprising rapidity. The number of Junior Audubon Classes was increased notwithstanding your Agent's absence of four months from the state, just at the time when this work needed his special attention. An increasing readiness appears on the part of Ohio newspapers to publish material relative to Audubon interests. A new branch of the Audubon Society has been formed at Columbus, which is taking up all progressive methods, and it bids fair to be one of the leading influences in bird-conservation in the Middle West. A Bird Protective Association is now being

formed at Cleveland, under the guidance of Elizabeth C. T. Miller. This organization is heart and soul in the new movement, and will influence northern Ohio most beneficially. The State Audubon Society at Cincinnati has a new President, Dr. Robert C. Jones, who is thoroughly in sympathy with educational work, and had arranged with the Superintendent of Public Schools in Cincinnati that every child shall hear 'bird-talks' and have an invitation to join a Junior Class during the school year. Nothing of this kind has ever before been undertaken by the Ohio Society.

Probably one of the most significant facts of all, and giving proof of the spread of the Audubon idea in education, is that now your Agent rarely meets with rebuff at the hands of superintendents and principals, as was formerly the case. He is now welcomed and invited to return. This means that the school authorities have considered the work soberly, and find it not a "diverting amusement," as once dubbed, but a matter of real worth. Besides all of these good things, it must be remembered that a greatly increased number of Ohio people made donations to this work within the year in the form of membership-fees to the National Association. The formation of Junior Audubon Classes this fall began automatically, and almost daily some evidence appears of a renewed interest in wild birds.

Please permit your Agent to take credit unto himself for one thing. He has succeeded in developing what is virtually a state-wide sentiment against the stray cat—a sentiment that expresses itself in action, with the result that in numberless back yards a cat-cemetery has been formed. Deserted kittens at back doors are rarer. Only three years ago, it was a common occurrence to hear their pathetic calls, and find yourself confronted with the necessity of taking them in or killing them. In this move I have been humane to the cats as well as merciful to the birds. Whenever I give a bird-talk—and I have given hundreds—I never fail to tell the truth about the stray cat's relation to wild birds.

May, June, and July of this year were unusually dry months in Ohio, and free from wind-storms, with the result that a remarkable number of birds were hatched and reared to maturity. This has been a banner-year in Ohio for the wild birds.

My report would hardly be complete without some mention of the Melon Seed-Saving Contest. This method of keeping kindly intentions toward wild birds in the minds of the children daily, and of a multitude of adults also during vacation, provoked only an amused smile from "those who know." They didn't believe the birds would eat melon-seeds—they don't believe it yet. It is true also that they never tried the experiment, and I have. It was a difficult matter to secure \$25 with which to offer prizes and pay for some printing, and the cash prizes I could afford to offer were too small. After the conditions of the contest and the prizes had been announced, and notice had been given in more than a hundred Ohio papers, the National Association of Audubon

Societies very kindly donated \$25, but too late to announce new prizes and give the contest that element of excitement that the larger prizes would have afforded. It is sufficient to say that results have proved the contest a highly valuable means of directing public attention toward Audubon work, and that at this early date teachers are requesting that a similar contest be arranged next year. The Columbus boy who saved forty pounds of seeds had the prize in mind, of course, but he never got away from that undercurrent of thought that he was saving the seeds to feed to the wild birds this winter. A complete report of the contest may be found in the October issue of *Blue-Bird*.

SPECIAL WORK IN FLORIDA

Knowing that Florida has ten National Bird-Reserves and is the home of one of the most active State Audubon Societies, I was under the impression, when engaged last winter to do Audubon work there, that the people of the state were familiar with the aims and purposes of the Society, and needed only to be reminded and urged a little to become active in the interests of their own wild birds. At the close of the first week of my engagement there, I had to reconstruct this notion. Again and again I found it necessary to explain the purposes of the Audubon Society. In four-fifths of the places visited I turned entirely new soil, and, I hope, sowed seed some of which escaped the barren places. This is in no sense a criticism of the previous efforts of the officers and other workers in the Audubon Society, for Florida is a big state, and much remains to be done.

During the early part of December, I met with some success; but after the 18th of the month Santa Claus side-tracked my efforts completely. With the coming of New Year came the flood of tourists, the concert-singers, and the Chatauquans, and my lecture-appointments, arranged by the Florida Audubon Society, often conflicted with other entertainments.

In nearly every town or city visited, I succeeded in getting into the newspapers not only announcements and reports of meetings, but short articles of an educational nature. The editors were uniformly courteous and generous of space. At all the public meetings my talks were received with interest; but my appeal for financial assistance, to support either the Florida Society or the National Association, met with disappointment.

Nearly all the schools received me cordially and made promises to form Junior Classes; but had I not followed up these visits with urgent letters, often three and four letters to each teacher, my efforts to have Junior Classes organized would have fallen far short of the actual result.

To give an idea of what I attempted and the methods used, I will relate the proceedings of an ordinary day. As soon as the public school had assembled, I presented myself to the superintendent, explained my work, and asked permission to talk to the classes separately. Almost invariably this was

granted, and I began forthwith. While I never cared to talk to kindergartners or the first grades, I often had to finish up with these, at the request of the superintendent. Permission was given me to go from one room to another, and the teachers were instructed to have the classes give me immediate attention. This resulted in my giving from eight to twelve fifteen-minute talks in the morning. In some of the larger cities I had to work in the schools in the afternoon, and have given as many as eighteen talks in one day. Usually afternoons were given to meeting a committee of the local woman's club, seeing editors of newspapers, visiting the Board of Trade, calling upon leading citizens, and writing letters. At 6.30 P.M. I often gave a half-hour talk in one of the moving-picture theaters, as a part of the regular program. This always meant a crowded house. From there I went to the place of my evening meeting, as arranged by those who had it in charge, and gave an hour's talk. Thence to my hotel, where the screen was again stretched and the lantern placed, and again I talked, often for an hour and a half. At these hotel talks I invited questions, and made a special effort to engage the attention of the tourists. I carried 150 lantern-slides, and can truthfully say that never did I show the same combination of slides or give the same talk twice in succession. After consulting with such people in a community as were in position to know, and keeping the figures they gave, I found in the end that at least two-thirds of my total number of adult hearers were tourists. I met them from every state of the Union. Hence the influence of my work was scattered abroad, and not concentrated in Florida.

Every railroad conductor who took up my ticket had to wear an Audubon button as long as I was on his train. I never missed an opportunity to saturate drummers from all points of the compass with the Audubon educational idea. I talked with all sorts and conditions of men, at all times of the day and night, and was always well received.

At many places I was met and assisted, but at some had to make all the preparations for meetings unaided. My audiences ranged from eight hundred, at a meeting in St. Augustine, to four at a meeting in Palatka. There was a card-party at Palatka that night. Some of my largest and most enthusiastic meetings were held on Sundays. Women's clubs were uniformly ready to give attention to the Audubon idea, and agreed to appoint bird-committees. Boards of trade wanted to know more of the work, and some took memberships with either the National Association or the Florida Society.

REPORT OF WILLIAM L. FINLEY, FIELD AGENT FOR THE PACIFIC-COAST STATES

Conditions have improved steadily on the Pacific Coast during the past year in favor of wild-bird and animal protection and propagation. The most important fight is now in progress in California, as is related in the report of



WESTERN GREBES AND FORSTER'S TERNS NESTING AT CLEAR LAKE, CALIFORNIA
Photographed by William L. Finley

the California State Society. This fight is the culmination of a struggle begun by the National Association of Audubon Societies in 1905, when they sent field agents to the lake-region of southern Oregon and northern California to investigate the killing of Ducks, Geese, and other game-birds, and the slaughter of non-game birds by plume-hunters. One hundred and twenty tons of Ducks and Geese were shipped from Lower Klamath Lake to the San Francisco markets during one season. Enormous numbers of Grebes, Terns, Herons, and other birds, were slaughtered during the nesting-season in that region,



NEST OF THE CANADA GOOSE, ON AN ISLAND IN CLEAR LAKE
Photographed by William L. Finley



WHITE PELICANS AMONG THE SAGE-BRUSH NEAR CLEAR LAKE

Photographed by William L. Finley

and the plumage shipped to wholesale milliners. This investigation of the National Association led to the first important step in saving birds in that region, by the establishment of three great wild-bird reservations, embracing Lower Klamath, Clear, Malheur, and Harney Lakes. The market-men and plume-hunters have resisted from the beginning, and are now making a big effort to get back what they have lost, so that they can finish their work of extermination. Lovers of wild birds on the Pacific Coast, and especially in California, feel that they never can repay the National Association for its generous contributions toward the establishment and maintenance of these great wild-bird nurseries, and in aid of the campaign to sustain the non-sale law.

Since the model bird-law was passed by the Oregon legislature in 1903, the sale of aigrettes, and of the plumage of other native birds, has been stopped almost entirely. A few years ago, a mail-order business sprang up on the Pacific Coast, and aigrettes and other forbidden plumage could thus be obtained from New York and Philadelphia, when they could not be purchased on this coast. This cut into the trade of both wholesale and retail milliners here, and they asked for a law prohibiting the wearing of such plumage. This law was passed by the Oregon legislature in 1913. When it went into effect, public notice was given that it was to be enforced. A woman was employed as warden, persons wearing aigrettes were told that they were violating the law, and in each case the plumes were confiscated by the state. Where plumes were given up without resistance, and a promise made to obey the law, no arrest was made; in fact, it has not been necessary to take a single case into court. This was the result of the newspapers of the state backing up this

law, and a strong public sentiment in favor of its enforcement, both resulting from years of Audubon educational work.

About a hundred lectures have been given in various parts of Oregon during the past year, covering various phases of protection and propagation of wild birds and animals. These were given by Dr. C. F. Hodge and John F. Bovard, both of the University of Oregon, and also by your Agent. The work of the Oregon Fish and Game Commission during the past two years has been of great importance educationally. The commission has spent much money in making moving pictures of the game-resources of the state, and of various phases of animal protection, to be used in educational work.

During the past summer, your Agent made a careful survey of Clear Lake, Klamath Lake, Three Arch Rocks, and Cold Springs Reservations. The last-named one is typical of seventeen wild-bird reservations in the West. It is a large lake formed by the building of a big dam by the United States Reclamation Service. It is in the midst of a sage-bush region entirely uninviting to water-fowl before the artificial lake was formed; but since the area was set aside as a Federal reservation, large numbers of Ducks, Geese, and other water-birds have been attracted there during every fall and winter, and many remain to breed. By coöperation of the state and Federal governments, bird-life on the various reservations has been well protected by wardens, and the birds have increased in numbers.



CORMORANTS AND MURRETS NESTING ON THREE ARCH ROCKS

Photographed by William L. Finley



A MURRE BROODING AT THREE ARCH ROCKS, OREGON
Photographed by William L. Finley

REPORTS OF STATE SOCIETIES

California.—Much of the energy of our Audubon Society during the past year has been expended to prevent the annulment of the Flint-Cary Non-Sale-of-Game Bill, which will come before the voters of California on November 3, 1914. This bill, prohibiting the sale of wild Ducks and wild Pigeons, in addition to other game, the sale of which had been forbidden in California for many years, was passed by large majorities in 1913, after a strenuous fight in which the conservationists won. Certain unscrupulous game-dealers, market-hunters, and hotel-men, in San Francisco, wishing to sell our game during the Panama Exposition, in 1915, organized under the misleading name of The People's Fish and Game Protective Association of California, invoked the referendum and succeeded—often by fraudulent means, it is rumored—in gaining the requisite number of names to place the measure on the ballot at the general election; and those who would save our game must vote "Yes," to sustain the action of the Legislature. That the people may know how to vote, the California Associated Societies for the Conservation of Wild Life, the newly organized Wild Life Protective League of America, the California Audubon Society, and the California State Fish, Game, and Forest Protective League, have been flooding the state with sample non-sale-of-game ballots, properly marked. The Associated Societies also issued a fourth "wild-life call," which we are helping them to distribute. The same men who invoked the referendum on the Flint-Cary bill circulated an initiative petition which,

if carried, would have denuded our state of wild life. Because of the fight put up by the organizations named above, and by the State, Fish and Game Commission, this petition was withdrawn.

In our share of the work we have been greatly aided by Mrs. Foster Elliot, State Chairman of Forestry in the Federation of Woman's Clubs, who has placed one of our sample ballots before every club in the state, and in recognition of our work our State Secretary has been made a commissioner on the forestry committee, and more than ever the two organizations will work together.

Besides this work, the usual number of leaflets have been distributed, and more lectures than ever have been given under the auspices of the Society. Dr. Joseph Grinnell, Dr. Harold Bryant, and Dr. Walter P. Taylor, of the staff of the University Museum, gave illustrated lectures; and Mrs. C. Robinson has used bird-slides with her forestry-slides, in her lecturing, thus extending the work to our advantage.

Two deputy game-wardens have been appointed in Los Angeles County to represent our Society, both of whom have done effective work. Miss Daisy S. Ritterband is Deputy No. 8, and Mrs. Harriet W. Myers, No. 18.—HARRIET WILLIAMS MYERS, *Secretary*.

Colorado.—The Colorado Audubon Society published its first leaflet last spring. It was written by the President, Edward R. Warren, and was entitled "Birds of Prey." It was largely distributed in connection with an exhibition of Owls and Hawks that the Audubon Society had at the Denver Stock Show, with the intention of showing the farmers which Owls and Hawks were injurious and which were really helpful. The collection of lantern-slides of birds begun by the Society in 1912 has been much enlarged, and has been much used by high-school principals. Several lectures have been prepared by members of the Society, to be used in connection with the slides. Lectures and talks illustrated by slides or skins have also been given by the President, by the Secretary-Treasurer, Mrs. Bushee, and by Dr. Arnold and Miss Robbins, of Colorado Springs, before schools and women's clubs.—BERTHA BUSHEE, *Secretary*.

Connecticut.—This Society, organized in 1898, was reorganized as a corporation empowered to hold real estate in June, 1914. The first annual meeting under the new constitution was held in the Memorial Library, in Fairfield, on Saturday, October 17. A large and representative attendance was present, and the president, Mrs. Mabel Osgood Wright, presided. The reports showed a marked increase in the interest in bird-protection, and that 1,395 Junior members were added during the year in Fairfield County alone.

An illustrated lecture was given by Ernest Harold Baynes, to the delight of all. After a lunch, served informally in the lecture-room, Birdcraft Sanc-

tuary was visited. This is a bird-reservation of ten acres, near the center of Fairfield, presented to the Society by a friend whose name is not made public. It is surrounded by a wire, cat-proof fence. A small pond of fresh water adds to its attractions for the birds, and a bungalow has been built for the resident caretaker. On the gate-posts are suitable inscriptions. This is to be a perpetual refuge for birds, and will grow more beautiful as it is developed. It is open to the public under certain restrictions on Tuesdays, Thursdays, Saturdays, and Sundays.—KATHERINE MOODY SPALDING, *Secretary*.

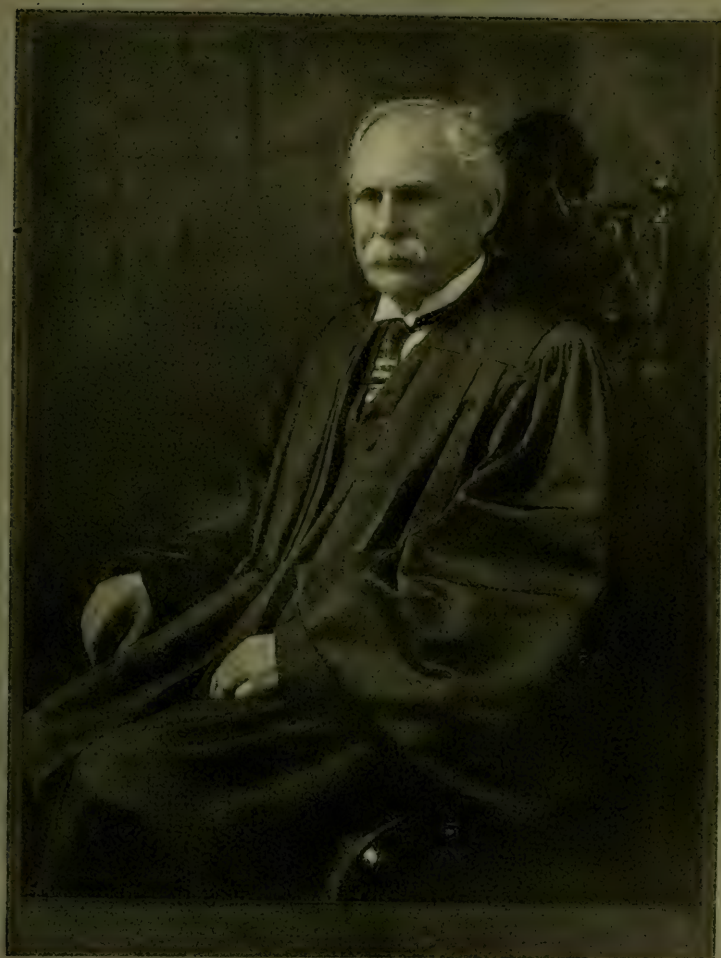
District of Columbia.—Judge Barnard is still our President, and we have three new honorary Vice-presidents—President Woodrow Wilson, Mrs. Josephine Daniels, and Prof. Ernest Thurston, our new Superintendent of Schools. At our annual meeting we had the pleasure of hearing Howard H. Cleaves, who gave us an illustrated lecture. On another evening Prof. Paul Bartsch told us about "Some Birds of the Pacific Coast."

Our spring bird-classes are held in one of the large public schools, thus helping the civic plan for using school-buildings as social centers. Our classes in the spring of 1914 had a total membership of 132, of whom 31 were teachers, 13 Camp Fire Girls, and 14 Boy Scouts. These classes were followed by six splendid field-meetings, during which a total of 127 different species of birds were seen and recorded by the 97 persons who joined in the walks.—HELEN P. CHILDS, *Secretary*.

Florida.—During the past year the interest in bird-protection has steadily advanced in Florida. The thirteenth annual meeting was held at the residence of President William F. Blackman, in Winter Park, March 3, 1914. In addition to the reports of the officers, addresses were made, letters read, and officers elected. It was shown that the volume of work is steadily increasing. More than 30,000 leaflets have been sent out by the Secretary, besides notices and literature. Early in the year an active part was taken in support of the "feather proviso" pending in the tariff bill.

Coöperating with the National Association, 162 Junior Classes, with a membership of 3,426, were organized, which placed Florida first on the list of Southern States. The prize of \$10, offered to high-school pupils in the state for essays on birds, was awarded to Miss Effie Rolfs, of Gainesville. A second prize, Chapman's "Birds of Eastern North America," was given to Miss Jeanette Hopson, of the Duval High School, Jacksonville. Similar prizes were offered to Clearwater schools by Oscar E. Baynard. At the state fair in Orlando an attractive Audubon booth was arranged by Mrs. Haden and Mrs. Vanderpool, where information as to the work of the Society was circulated by means of leaflets and pictures. Many copies of the new booklet of the Florida game-laws also were distributed.

Dr. Eugene Swope, of Cincinnati, Ohio, was employed as field agent for



Job Barnard

JUDGE JOB BARNARD
PRESIDENT OF THE DISTRICT OF COLUMBIA SOCIETY

four months by the executive committee and the National Association jointly. He obtained forty new members for the Society, and an account of his experiences may be found elsewhere in this report.

Branches of the Society are now established at St. Petersburg, Kissimmee, Tampa, Winter Haven and Plant City. It is hoped that many others will be formed during this autumn and winter. Each branch lends its financial aid to the State Society by becoming a sustaining member (payment \$5), and reports quarterly to the Secretary. The St. Petersburg branch, of which Mrs. Katherine Tippets is the President, has had a successful winter. Mrs. Barton, the Secretary, reports that never has there been such universal interest—the attendance of the bi-monthly meetings was never so large. A prize of \$5, open to any boy in the manual training school who made and put up a bird-house in which a family of birds was hatched and raised, was won by Gregg Cooper for raising three families of Martins. Orders were taken at the school to furnish bird-houses built on the Von Berlepsch plan, and many were sold and put up. A mock trial by jury of the English Sparrow before Judge Wilson brought together many keen-witted men and women arguing for and against its claim for life.

The branch of the Society at Kissimmee, Mrs. M. J. M. Willson, President, is well organized and efficient. The branch at Plant City, Mrs. Taylor, President, has twenty-three members. A society at Winter Haven was formed last spring. Dr. H. R. Mills has been tireless in his efforts for bird-protection in Tampa, where, on June 29, 1914, a branch was organized, with a membership of forty. A determined, but unsuccessful, attempt was made to induce the city council to pass an ordinance licensing cats, similar to that which exists at St. Petersburg.

Mrs. Kirk Munroe, whose interest and influence for bird-protection is appreciably felt in southern Florida, has been very active the past year, having spoken twice before the Woman's Club at Miami, and given much attention to encouraging bird-work in the schools of Cocoanut Grove. Prizes were given, essays were written, and at their "Garden Exhibit" one little girl's table was charmingly arranged with various birds made from crepe paper. This exhibit was carried out under the guidance of Mrs. McCormick.

It is hoped some decisive measures will be taken by our recently formed branches to prohibit in their towns the selling of caged wild birds. Dr. H. R. Mills, acting for the Society, procured the arrest and fine of two men doing this in the vicinity of Tampa. Mrs. Tippets discovered a woman at St. Petersburg buying several of these cages of birds to carry North, but the woman escaped in the night with her booty.

The Hungerford School, at Eatonsville, has continued its study of bird-life. Two prizes of \$2 each were given for essays.

Our President, Dr. William F. Blackman, has given much efficient service to the Society by addresses, correspondence, and detail-work. In April he

visited Indian Key Bird Reservation, in Tampa Bay, where he saw Roseate Spoonbills, White Ibises, Man-of-war-birds, Cormorants, Great Blue Herons, and Terns. In May he made a most interesting trip to the Big Cypress Swamp, forty miles south and east of Fort Myers, where he visited both the Okaloa-coochee and Corkscrew rookeries, which are guarded by paid wardens of the National Association. Here the large cypress trees are nesting-places for many thousands of birds. Doctor Blackman identified fifty-seven species of birds while on this trip. On returning to Fort Myers he addressed a meeting of citizens, and as a result of his appeal, and of the coöperation of Mrs. Hanson, our local Secretary, it is hoped a Lee County branch will be formed. Accounts of his visit were printed in many newspapers, both in Florida and elsewhere.

Our thanks should be extended to the press of Florida for its continued support; and to the Daytona Board of Trade, the Humane Society, the Palmetto Club, the Housekeepers' Club, and the Sunshine Society, for their coöperation.—MRS. KINGSMILL MARRS, *Chairman Executive Committee*.

Illinois.—Although the Society has been so unfortunate as to lose by resignation its President and Secretary during the year, and has felt keenly the loss, the usual activities have moved along, and new enterprises have been accomplished. In January, Miss Alma Hardman, our efficient Secretary for a year and a half, felt obliged to resign. Mrs. Frederic H. Pattee, a Director, was elected to fill the vacancy. In April, Ruthven Deane, our honored President for sixteen years, presented his resignation to the board, and with the greatest reluctance the Directors finally acceded to his wishes; but Mr. Deane's invaluable experience and wide acquaintance with ornithological people will still be available to us, as he continues his connection with the Society as a Director. O. M. Schantz, an enthusiastic student of birds, was chosen his successor.

At the annual meeting, held in Fullerton Hall on May 2, the officers mentioned above were reëlected. Miss Amalie Hanning was also reëlected Treasurer, and A. L. Stevenson, a member of the board was elected Vice-President. At the annual meeting the Society and its friends had the good fortune to hear Edwin H. Forbush, whose interesting lecture and fascinating pictures were greatly appreciated by the audience.

Our membership-list shows an increase of sixty, including two life-members. The usual wide distribution of Audubon literature has been made, and a special appeal for interest and support was distributed at the convention of the State Teachers' Association, in Springfield, in December. In February, with the coöperation of the National Association, a large number of "Winter Feeding" cards were sent out, largely to farmers' institutes and rural teachers. Arrangements have been made with the Illinois farmers' institutes to furnish speakers gratis to all institutes that will give places on their programs.

The most effective piece of work that the Society has to report this year is

the successful culmination of our plan to send a lecturer into the field. Mr. Henry Oldys, of Maryland, was selected for this task, and the choice proved a most happy one. Through the generous financial coöperation of the National Association, Mr. Oldys made a tour of the state covering four weeks in October and November, 1913. This trip was so successful that he was engaged for a similar lecture-tour in May of this year. He spoke to colleges, schools, women's clubs and various societies. Mr. Oldys covered a wide territory, reaching sixty-four towns, and addressing audiences aggregating about 30,000 persons.—
BERTHA TRAER PATTEE, *Secretary*.

Indiana.—The work during the past year has been along educational lines. More than 100 Junior Audubon Classes have been organized, containing 1,914 members. Reading-matter and lectures about birds are much called for by schools and clubs. Several stereopticon lectures on the subject have been given by members of the state and local societies, to schools, churches, conventions, women's clubs and farmers' institutes. The Extension Secretary, Mrs. Etta S. Wilson, has worked faithfully, but since last April has been sadly missed because of a serious illness.

The Allen County Audubon Society, at Fort Wayne, is doing valuable work under the leadership of Charles A. Stockbridge. It has a room in the public library, which contains the Stockbridge collection of birds, and which serves as a meeting-place, once a month.

Articles in the newspapers, especially the agricultural ones, on feeding birds in winter, have carried instruction on this subject to many homes. In February, acting on a message received from the office of the National Association in New York, telegrams were sent over the state to bird-lovers, requesting that the birds be cared for at once. The club-women of the state are helping nobly in bird-protection; one of the articles to appear soon in the General Federation's magazine will be a history of the Indiana Audubon Society and what it is doing. The Nature-Study Club of Indiana, with more than 100 members, is coöperating with us in doing work for the birds.

The Annual Meeting at Evansville was a great success. The teachers, the ladies of the Woman's Club, and the members of the Evansville Audubon Society, did much to make it so. Harriet B. Audubon, of Louisville, granddaughter of the great naturalist, was invited to be the guest of honor. All the schools gave evidence of great preparation for the coming of the State Society. Bird-boxes, bird-calendars, bird-stories, and many good paintings of birds made by the pupils were shown. The little folks also contributed their share by cutting, pasting, and stringing pictures of birds, to decorate the many boughs that lined the entrance-halls. Bird-talks were given in the public and parochial schools. Evansville has the largest Junior Class in the state. At the Thursday and Friday evening meetings the following addresses were given: "The Audubon Movement," by the President; "Some Birds of Indiana,"

by Amos W. Butler; "The Adaptation of Birds to Flight," by Prof. D. W. Dennis; and "How to Have Better Bird-work in the Schools," by Prof. Stanley Coulter. Dr. Eugene Swope was present as the representative of the National Association.

A boat-trip on the Ohio River to Henderson, Kentucky, was taken. Boy Scouts met the boat and acted as guides. This town was at one time the home of John James Audubon. The foundation of his old mill is still to be seen. A public address was given in the town, and the citizens presented to President Woollen a gavel made from the water-wheel of the old mill. The suggestion was made that Henderson be made a park reservation, and that a monument to Audubon be erected, the expense to be borne jointly by Kentucky and Indiana.

The following officers were elected: Prof. Stanley Coulter, President; George S. Clifford, and William Watson Woollen, Vice-Presidents; Mrs. Etta S. Wilson, Extension Secretary; Elizabeth Downhour, Secretary; and Carrie Carpenter, Treasurer.—ELIZABETH DOWNHOUR, *Secretary*.

Iowa.—Since the spring of 1904, the office of the State Audubon Society has been in Waterloo. Feeling, however, that other headquarters and new officers would add new life and enthusiasm, we are endeavoring to arrange the desired changes. In the meantime we shall carry on the work. Our President, Mrs. W. B. Small, has answered many calls, and has given lectures and talks to clubs and schools. The Rev. George Bennett, Field Agent of the National Association, has taken charge of the lantern-slides owned by the State Society, and generously responds to requests for illustrated lectures. Having been granted the privilege of using a beautiful tract of land near Waterloo as a local bird-preserve, we are preparing posters to warn hunters against shooting, and small boys with air-guns against trespassing. The Iowa Park and Forestry Association, being interested in the conservation of forests and lakes of Iowa, should, we believe, include also the conservation of bird-life, and we expect to get its coöperation.

The newspapers of Iowa in recent years have been of great service to the Society. In Waterloo, Edgar W. Cooley, of *The Times-Tribune*, has organized a Bird-Lovers Club which now has seventy members—boys and girls between five and sixteen years of age. The members pledge themselves to protect birds and their nests from destruction, to build nesting-houses, and to provide food and water for birds in the winter. A large number of bird-houses were erected by the members during the spring and summer.

The officers of the Iowa Audubon Society are: President, Mrs. W. B. Small, Waterloo; Vice-Presidents, Mrs. James B. Diver, Keokuk, and Miss Frances Grout, Waterloo; Chairman of Executive Committee, Dr. Margaret V. Clark, Waterloo; Secretary, Mrs. William F. Parrott, Waterloo. The society has no annual dues, but every year bird-lovers in the state send a new list of names,

with the accompanying fee of twenty-five cents for adults and ten cents for Junior members. All fees and other moneys are devoted to the circulation of the Educational Leaflets of the National Association and other good literature.

—JANE PARROTT, *Secretary*.

Kentucky.—I have never sent you a yearly report with as much pleasure as I send this one, because there is much evidence that the cause of bird-protection is bearing fruit. Birds are becoming more numerous about our homes, especially the larger birds, such as Robins and Woodpeckers. Bird-boxes are to be seen everywhere; and the drought of last summer reminded bird-lovers that drinking-fountains would be appreciated. One may see many of these founts in this state, some of stone or concrete. Our Society has held about fifteen public walks during the year for the purpose of studying birds. We have sent nearly a thousand clippings and tracts to newspapers for publication. We have supplied at actual cost a great number of field-glasses and bird-books to students of bird-life; and our members have set a good example to others by putting up bird-boxes and drinking-founts. One member has planted and left standing a large patch of hemp for a winter-refuge; another has left a thick growth of sunflowers; and many of us insist on keeping uncut a patch of briars or horseweeds for the same purpose.

Our former President, Dr. James H. Gardner, has moved to Oklahoma, and our new President is Judge Charles Kerr. Another valued member of our society is J. Quincy Ward, Executive Agent of the State, Fish and Game Commission.—VICTOR K. DODGE, *Secretary*.

Maine.—The year has been one of activity, and the growth of the sentiment for the increase and protection of birds has been marked. The demand for popular bird-books has continued, while a wide range of local organizations, granges, and literary clubs, have continued to ask for lectures and papers on birds. In Washington County, Clarence H. Clark, Chairman of the Board of County Commissioners, has performed a most valuable work in giving talks on birds and their value, urging their protection on teachers, schools, and clubs; and in impressing on the public need of attention to this matter. He has distributed pamphlets; has had the federal regulations relating to game-birds widely published in the newspapers of eastern Maine; and has taken part in the organization of Junior Audubon Societies. In Hancock County, Miss Cordelia J. Stanwood has continued her activity by publishing many attractive articles in the journals of the day, and by distributing leaflets, and laboring for bird-protection. In Penobscot County, Mrs. Fanny Hardy Eckstorm has been vigilant, rendering most efficient service. In Cumberland County, the State Secretary has endeavored to meet calls relating to birds, their increase and protection; and it is most gratifying to acknowledge the support and encouragement he has received from many persons and



V. K. Dodge.

VICTOR K. DODGE
SECRETARY OF THE KENTUCKY SOCIETY

organizations. In York County, Mrs. Fred P. Abbott, President of the Maine Federation of Woman's Clubs, did a large amount of work in addressing church organizations, and various other gatherings. She made fifty-six visits to women's clubs, and nearly everywhere said a word for the birds. On several occasions her talks were illustrated by lantern-slides obtained from the National Association.—ARTHUR H. NORTON, *Secretary*.

Maryland.—A most active interest in bird-welfare, and in the legislative work of the Audubon Society, is manifest throughout Maryland. A large club was organized last spring in Roland Park, Baltimore's most attractive and best-known suburb. This village, with its hedge-bordered lanes, fine old trees, and gardens rich in shrubbery, furnishes an ideal sanctuary; and the residents of Roland Park are now studying the conditions most favorable to local protection and propagation of birds. In the beautiful Green Spring Valley similar hospitality is extended to bird-visitors. There the members of the Garden Club are as zealous in encouraging the presence of birds as in the culture of flowers.

At the March meeting of the Maryland Audubon Society, one of its members, Mrs. Fleming, of Gambrill's, brought to our attention the purchase by the United States Government of a large tract of land to be used as a dairy-farm for the Naval Academy at Annapolis. This piece of land has long been the favorite resort of many varieties of bird-life. Hence it occurred to Mrs. Fleming that, in addition to its service to the Academy, it might also become a game-preserve. Of the same mind with her was Paymaster Bryan, U. S. N., of Annapolis, and they solicited the coöperation of the Maryland Audubon Society to carry out this plan. An appeal from the Society to the Secretary of the Navy brought a sympathetic response from Mr. Daniels, and orders to make ample provision for the protection of the game on the farm.

The offer by the National Association of the series of instructive pictures to the children joining Junior Audubon Classes in the public schools is stimulating juvenile interest. Audubon Societies can do no work which will produce finer results than to coöperate with the National Association in this plan to enlighten the children, and plant in their mind ideas that will bear fruit when they become men and women. Special attention should be given the children of our foreign-born citizens, for it is with such citizens that our game-wardens meet their greatest difficulties in enforcing the laws.—MINNA D. STARR, *Secretary*.

Massachusetts.—The activities of the Massachusetts Audubon Society have been greatly extended during the past year, and its growth in membership and usefulness has been marked. Its sustaining-membership has been increased from 1,500 to 2,200, and its life-membership from 150 to 295, virtually a doubling. It now occupies large offices with the New England Agency

of the National Association of Audubon Societies in the rooms of the Boston Society of Natural History, at 234 Berkeley Street, Boston, where it has a large exhibition of bird-protective appliances, bird-houses, feeding-stations, baths, etc., and a quantity of literature of the bird-protection movement, including charts, calendars, and the Educational Leaflets of the National Association. This exhibition is free to all visitors and makes the Society the headquarters of the steadily increasing interest in the protection movement throughout New England. The Society, as usual, has taken an active part in recent legislation, having successfully opposed bills inimical to bird-life in the state legislature, and aided those in its favor.

During the deep snows and cold of the past winter, acting with the National Association, it placarded the state with requests that people feed the birds, giving full directions how to do it. It also wrote to about 5,000 persons, and to newspapers throughout the state, making the same request. The work was very generally taken up, and without doubt thousands of useful birds were saved from starvation. During the year the Society's traveling lectures and traveling libraries have been in constant use all over the state; and the Secretary lectured fifty times before various organizations, reaching audiences of from fifty to a thousand persons.

Coöperating with the National Association's work of establishing Junior Classes, an appeal was made to every school-teacher in the state, and 359 classes, containing 8,463 Juniors, were added to the roll.

A new Bird Calendar has been published—six large plates of bird in colors, hand-printed on blocks in Japan—forming a series of singular beauty and value. The Calendar, like the Society's three unique and beautiful Bird Charts, finds eager purchasers in distant states as well as in Massachusetts.

The annual meeting of the Society, held in March, packed Huntington Hall to the doors, more than a thousand people being in attendance. In January, William Brewster, the distinguished Cambridge ornithologist, founder of the Society, and its President since 1892, resigned because of pressure of other duties, greatly to the regret of all. Edward Howe Forbush, State Ornithologist, known the world over for his books on the economic side of bird-life, and by his work for bird-protection, was elected to the vacancy. The Society is head-quarters for information, and instructs in the formation of local bird-clubs, which are steadily increasing in number throughout the state.—WINTHROP PACKARD, *Secretary-Treasurer*.

Michigan.—The Michigan Audubon Society held its annual meeting at the Public Library, in Grand Rapids, September 8 and 9, 1914. It seemed strange to assemble without the familiar presence of Jefferson Butler, until lately our faithful worker and leader, who, from the inception of the organization until his death, never failed to be present at its meetings and to take an active part in all the proceedings. The Grand Rapids Society, gave the visit-

ing delegates a very profitable and delightful two days. We were taken for a tour through the city's parks, and were shown the new bird-reserve, Hodentyle Park. This is a beautiful, rolling tract of forty acres of original timber, in which has been constructed a lagoon two miles in length. It contains many islands which are admirable nesting-sites for water-birds. The whole park is rapidly being planted with wild flowers, shrubs, and vines, making a veritable bird-paradise, to be forever conserved.

On Tuesday evening, Judge Harry Creswell, President of the Grand Rapids Society, gave a pleasing address on the Audubon work in the city; one of the teachers reported on Junior Audubon work, and Joseph Dodson, of Chicago, spoke on methods of attracting wild birds about the home. The annual business was disposed of on Wednesday. Mrs. Munger, Acting President, reported that she had represented the Society at the National Conservation Congress at Washington, D. C., in November, 1913; and had spoken on bird-protection at many schools, granges, farmers' clubs, horticultural societies, boys' clubs, women's clubs, teachers' institutes, and other places, on several occasions giving illustrated lectures. At her request the State Department of Public Instruction had agreed to recognize Arbor Day as equally Arbor and Bird Day; and she had compiled much material for the first Arbor and Bird Day Bulletin, which was sent out to all the teachers in the state. Mrs. Munger reported coöperating with the State Library, the Public Commission, the State Game Warden, the Forest Scouts, and the State Humane Society, and of finding them all interested in the cause of bird-protection. She had sent out 53 packages of literature, besides personally distributing about 1,000 of the Educational Leaflets issued by the National Association; had written about 600 letters and cards, and 20 newspaper articles, and had furnished several bird-programs for clubs and granges.

Favorable action was taken on the following subjects:

(1). The licensing of cats. (2) The removal of the Bob-white from the list of game-birds. (3) Repeal of the law offering a two-cent bounty on English Sparrows. (4) That since the enforcement of the weed law, which requires the destruction of all roadside weeds and shrubs, would deprive the birds of food and nesting-sites, that law ought to be amended. (5) That the Society hold an exhibit of bird-houses, breeding-devices and bird-literature at county fairs, state fairs, and other large public gatherings. (6) That the Society provide for giving systematic advice and instruction regarding the feeding of wild birds in winter. Much lively discussion was heard over the cat-licensing problem, but the President's report with its recommendations was adopted.

The election of officers resulted in choice of Mrs. Edith C. Munger, of Hart, for President; Charles K. Hoyt, of Lansing, for Vice-President; Miss Gertrude Reading, of Hart, for Secretary-Treasurer; and an Executive Committee consisting of the President; the Vice-President; W. B. Mershon, of Saginaw;

Charles M. Greenway, of Flint; and H. E. Sargent, of Grand Rapids. The Society has 258 members, and \$143.11 in the treasury.

Mrs. Munger, by her constructive work for better citizenship, has become one of the assets of Michigan. She is one of the nation's forward-looking women, the champion and defender of suffering humanity. Mr. Hoyt, the oldest man in point of service in the game-warden department, will be of great help in practical enforcement of the laws. Mr. Mershon, who is president of the State Game and Protective Association, will continue to be, as he always has been, the financial backbone of the organization. Mr. Greenway, editor of the Flint *Daily Journal*, is one of the most prominent newspaper men in the state. Mr. Sargent is director of the Kent Scientific Museum, and will help the educational work tremendously, as he is always collecting material for work in the schools and in other organizations.

Much disappointment was expressed when a telegram was received on Wednesday afternoon from the National Secretary, T. Gilbert Pearson, of New York, stating that an unavoidable accident had prevented his reaching Grand Rapids in time to give his anticipated lecture that evening. Mr. Mershon and Mr. Sargent gave enthusiastic talks on our common birds and their characteristics and uses, showing Mr. Sargent's beautiful bird-slides. Mr. Mershon dwelt especially on the now extinct Passenger Pigeon. Mr. Hoyt was requested to give a talk on the game-warden department, and responded with an excellent address, full of practical suggestions as to how the Society might make good use of the department in furthering the cause of bird-protection.—GERTRUDE READING, *Secretary-Treasurer*.

Minnesota.—The work of the Society in this state has been along educational lines. The Secretary has given several lectures on birds during the year, two before the Minnesota Game and Fish Protective League. Our Public Library has added to its collection a set of the bird-slides made by the National Association of Audubon Societies, and these slides have been in great demand by the teachers in both the grammar and the high schools.

The winter of 1913-14 was favorable to winter birds, being mild, except a few days of sub-zero weather, and with but little snow. The Minneapolis Park Board has established bird-feeding stations in seven of the larger parks, where a generous quantity of suet, seeds, and grain is distributed daily. The smaller insectivorous birds have been very numerous during the summer, but the shore-birds are getting scarcer every season. The Pinnated Grouse (Prairie Hen) is holding its own in some districts, while in others it is getting rare. Many of their nests were destroyed in the spring and early summer by heavy rains which flooded the lowlands over great areas. At Heron Lake, in the southwestern part of the state, a large number of nests of the Black-crowned Night Heron, and of Teals and other Ducks, were destroyed in the same way.

The Minnesota Legislature will convene early in 1915, and a strong effort



Manley B. Townsend

THE REV. MANLEY B. TOWNSEND
SECRETARY OF THE NEW HAMPSHIRE SOCIETY

will be made to secure changes in the present game-laws, and to get the game and fish department removed from politics. A universal licensing system, and a law to prohibit boys under eighteen to hunt or to carry firearms for the purpose of hunting, are also to be sought.—J. W. FRAZEN, *Secretary*.

New Hampshire.—Our Society was not organized until February 26, 1914, but enough has been accomplished in this first eight months to indicate a future full of success and usefulness. A membership of 307 has been secured. The receipts from life-memberships, now amounting to \$425, have been set aside as a permanent fund, the interest only to be used for the work. There is a balance in the treasury on the right side. We are fortunate in having secured a strong set of officers, from the President, Gen. Elbert Wheeler, down our list of Honorary Presidents and Vice-Presidents, including many of the most prominent and influential men and women in the state.

As soon as its income warranted the step, the Society engaged the Secretary to act as a salaried field agent. That work has been pushed with energy. A voluminous correspondence has been maintained, articles on feeding birds in winter, and on bird-protection, have been written for publication in the newspapers, the National Association's valuable "Bulletin No. 1" has been distributed, and lectures on "Our Native Birds, and Why We Should Protect Them," have been given before various societies, clubs, institutes, at summer hotels and elsewhere. One lecture given in Concord, at the meeting of the State Fish and Game Association, resulted in an arrangement whereby the field agent is to give this lecture widely throughout the state before local bodies of sportsmen.

E. C. Hirst, State Forester, has offered to coöperate with us to make all the forest-reservations in the state into bird-sanctuaries—a matter of great importance.

A busy winter's program has been planned. It is purposed to push vigorously the work of organizing Junior Audubon Clubs in the schools, as planned by the National Association. The Secretary intends to watch the Legislature to prevent hostile legislation, and to attempt to secure better laws. Our Treasurer, Herbert E. Kendall, is sure of election to the coming Legislature, and will be a valuable man for us there. The Society wishes to express its grateful appreciation for the kindness shown us by Messrs. Edward H. Forbush and Winthrop Packard, of Massachusetts, and for the advice and assistance of the National Association.—MANLEY B. TOWNSEND, *Secretary*.

New Jersey.—The New Jersey Audubon Society has increased its membership during the past year by one patron, five life members, 75 sustaining members, 325 members and 9,398 junior members, making the present membership seven patrons, 18 life members, 180 sustaining members, 718 members, 217 associate members, and 25,966 junior members—total 27,106. The Society



George Batten

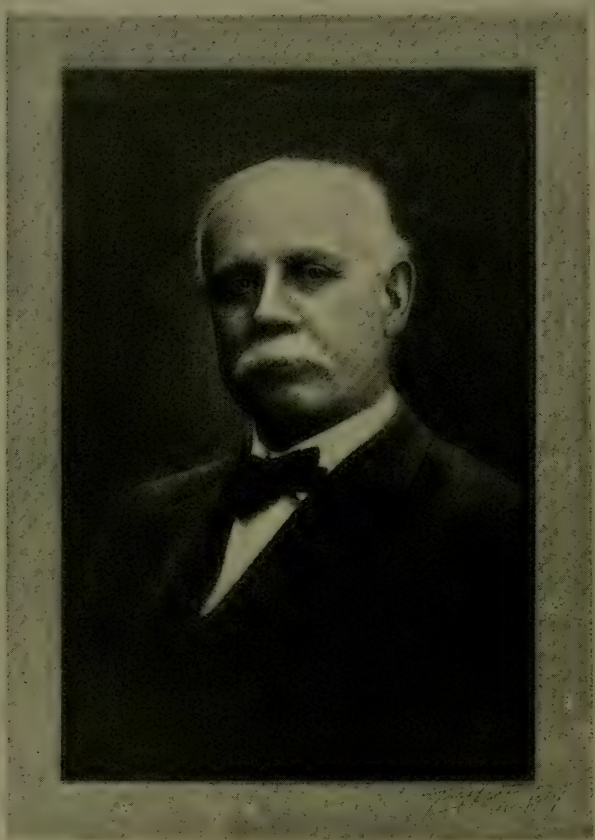
GEORGE BATTEN
PRESIDENT OF THE NEW JERSEY SOCIETY

has arranged to employ the entire time of a salaried Secretary-Treasurer. Legislative activity has been confined to the usual influence on legislation affecting bird-life. The Society now publishes independently, *The New Jersey Audubon Bulletin*, issued bi-monthly, and illustrated with halftones. Various press articles have also been issued and widely published by the newspapers of the state. Junior Audubon Class work has been continued, in coöperation with the National Association, and 436 classes were organized. The fourth annual meeting was held in Newark, on October 6, when the Trustees were reëlected, with the exception of Mr. W. W. Grant, resigned, who was succeeded by Mr. Samuel N. Rhoads. The officers were reëlected. At the public session in the evening, William L. Finley, of Portland, Oregon, showed a wonderfully fine series of wild-life motion-pictures, and spoke of protection work in his state.—BEECHER S. BOWDISH, *Secretary*.

North Dakota.—The North Dakota Audubon Society has continued its work with steady and substantial progress. Interest in the study of bird-life, and in the protection of our birds, has been continuously developed, and the most cordial relations and hearty coöperation exist between the society and the State Board of Control of Game. The list of members has been increased. The finances of the Society are in excellent condition. Much advancement has also been made in the Junior work of the state. Many addresses have been given by members of the Society during the past year, before meetings of federated clubs, educational associations, and college students. It is planned to hold the annual meeting in the near future at the Agricultural College, when those in attendance will have an opportunity to inspect the series of birds in the zoölogical collection. This collection of mounted birds is now one of the most complete in the state, and enables persons to identify species with whose appearance they have become familiar in the field, but of whose proper names they are ignorant.

Owing to the work of the Audubon Society more and more attention is being given to bird-study in the schools, as the teachers are learning how much interest may be awakened in the pupils through the study of the habits of birds. The literature and the pictures issued by the National Association are now available in this state, and are proving welcome and effective. The matter of establishing bird-reservations in suitable places is receiving thought, and will probably come up for consideration at the next meeting of the Legislature.—W. B. BELL, *President*.

Ohio.—We sustained a great loss during the past year in the death of our President, John P. Cummins. For four years Mr. Cummins had dignified the office of president, and under his leadership the work had progressed and the membership increased fourfold. His was not the type of scientific mind that dissects and demolishes, but the appreciative and enthusiastic type that



J. P. CUMMINS
PRESIDENT, UNTIL HIS DEATH IN 1913, OF THE OHIO SOCIETY

sees the beauty and feels the lesson that nature is teaching, and leads a man to go out as a missionary to spread this lesson broadcast. It would be treason to his memory to permit that work to suffer for which he gave so much time and effort. The Society has since held another election, at which Dr. Robert C. Jones was chosen President.

Owing to the death of Mr. Cummins, the Society abandoned the series of lectures in the libraries, which had been given so regularly, and in which Mr. Cummins had always played so prominent a part. Nevertheless, the Society has not been inactive. Dr. Eugene Swope, Field-Agent, in Ohio, of the National Association, gave fifty lectures last year in Cincinnati and vicinity, with an average attendance of 125 (and this was accomplished despite the fact that he spent the winter in Florida), has organized large Audubon Societies in Columbus and Cleveland, and has been instrumental in bringing the work of the Society before the public in every part of Ohio.

Our new President has already given lectures in eight of the public schools, and has interested the Superintendent of Schools in the educational plan for the coming year. Mr. Cramer has, as usual, given numerous lectures to clubs and schools, and for many years has been the personal conductor of the field-excursions which the 'Ramblers' have enjoyed weekly. Because of his knowledge of birds, and because of the knowledge of general zoölogy and botany of Mrs. Hansen, another active member of the Society, these walks are the quintessence of cultural enjoyment.

Other women, too, have done much to disseminate a knowledge of birds, notably Mrs. Lewis Hopkins, who has been very active in Georgia in the winter and in the North in the summer. She works with true missionary spirit, and spreads the news of both the esthetic and economic value of birds in the charitable clubs as well as in the prominent women's clubs of which she is a member, yet she finds time to write instructive papers on "Wing Construction and Flight," on the "Analysis of Bird Music," and on other themes, to the entertainment and advantage of the Society. Nevertheless, the plans for the coming year are more ambitious than ever, and where there is ambition and zeal, there must surely follow worthy results.—KATHERINE RATTERMANN, *Secretary*.

Oregon.—The Audubon work in Oregon for the year has been devoted largely to education. The sentiment among the people regarding the protection of insectivorous birds is favorable, and in some places strong. We have the boy with the gun, the immature man with the gun, and the alien with the gun, and have to deal with them, each after its kind. The law forbidding wearing of millinery plumage has been enforced with scant mercy, so that the sight of a Grebe-breast or a Heron's plume is rare on our streets, and then usually the feathers are worn by a tourist from some eastern state. Our warden—a woman—politely gives the culprit warning as to the law and the con-

sequences, whereupon, as a rule, the plume is cheerfully and sometimes apologetically removed.

Reports from bird-reservations are satisfactory. The small remaining colony of White Herons, which is being so carefully watched, is reported as holding its own.

The state was gone over fairly well last season by bird-lecturers with lantern-slide accompaniments—a method of entertainment insuring good audiences. We find that plain bird-lovers, who know the local birds and their habits, and can talk with interest and enthusiasm, especially if they can tell a bird-story and whistle a few of the notes and calls of the birds, arouse much intelligent interest and get a following among children. This kind of appeal is better, therefore, for every-day use, than more elaborate lectures would be. We are about to add some moving pictures of birds to our winter lectures, and hope to get much benefit and stimulation from hearing eastern talkers who are skilled in these matters.

All of us have taken to making nesting-houses for birds with zeal and success. Bathing-pools, lunch-counters, feeding-devices and such matters are common. The mild winters of western Oregon make winter-feeding not so much of a problem as in the East, but we give it much consideration, knowing its value to both the guests and the caterers.—EMMA J. WELTY, *Secretary*.

Pennsylvania.—Since the close of its year of legislative work for the protection of the Herons, the Pennsylvania Audubon Society has been principally occupied with different forms of Junior work. In coöperation with the National Association a large success was made in this direction, no less than 354 Junior Classes, containing 6,790 members, having been formed in the schools of this state since the last report. A satisfactory membership has been arranged for the Boy Scouts, by which they become "Protectors of the Birds," and which entitles all members in good standing to receive a special Audubon button designed for them by the society of that name. A medal is also offered to the Scout who can show the best work done for bird-protection during the year. This interesting work with the Scouts was begun only last spring, but promises happy relations between boys and birds.

The usual activities have been continued during the year. The traveling libraries have been renewed, and, with the generous assistance of the National Association, the Pennsylvania Society has planned for this autumn a tour of the state by Henry Oldys, of Washington, the well-known lecturer on birds, whose rendering of bird-songs has delighted so many Audubon audiences. This tour, which will begin in the middle of October, will, it is hoped, not only be of use to the Junior Audubon Classes, but will increase the interest in the work of the National Association and the State Society. With these plans on foot the Pennsylvania Society feels that it has a busy year ahead.—ELIZABETH WILSON FISHER, *Secretary*.



Witmer Stone

WITMER STONE
PRESIDENT OF THE PENNSYLVANIA SOCIETY

Rhode Island.—Our State Audubon Society has had a prosperous year. In addition to the regular work of forming Junior Classes, holding field-trips and lectures, and keeping its circulating and traveling libraries at work, the Society has taken a quiet but exceedingly active interest in bird-legislation. Every Congressman from Rhode Island supported the migratory-bird law, and the plumage bill. The Society is also responsible in a large measure for the change in the personnel of the State Bird Commission, which consists of five men, representing every county of the State, and all appointed at one time by the Governor for a term of three years. The membership of this Commission has always consisted wholly of sportsmen, interested primarily in the killing of birds. The new Commission, for 1914-1917, has three members who are particularly concerned in the protection of birds, one of them a Director of our Society.

Through the indefatigable efforts of two of our most earnest Directors, George C. Phillips and Harry S. Hathaway, and the assistance of experienced friends elsewhere, a new bird-law was drawn to conform with the Federal regulations for migratory birds, and was enacted by the legislature. Rhode Island now has, therefore, almost an ideal bird-law, by which bounties on Hawks and Owls are banished, and spring shooting is abolished, also shooting from motor-boats in the waters of the state, which had been particularly destructive to ducks.

From the Rhode Island Woman's Club the Society received a gift of \$50 for the purchase of books for its library, and from the state \$60 allowed for the expenses of the traveling libraries. With these funds it has been possible to increase the size of the library and extend its benefits.

Early in the year a fund was raised by subscription to be used for the employment of a regular worker, as it is absolutely necessary that more time be given to the Society's campaign than the regular officials have at their disposal. We are therefore endeavoring to organize our work by employing a woman who shall first devote her time to the Junior department, and gradually extend the influence of the Society to adults. The problem of interesting the high-school boy who has arrived at the gunning age has been forcibly brought to our attention by the many opportunities for game-shooting along the shores of the state. As an offset to this attraction the Society is to offer a first prize of a \$22 camera, and a second prize of a \$10 camera, to any boy, resident in the state and not over eighteen years of age, who shall take and exhibit the best set of bird-photographs. The prizes are given by The Hall & Lyon Company, of Providence, and will be awarded by competent judges at an exhibit to be held some time in June, 1915.—H. L. MADISON, *Secretary*.

Tennessee (East).—Owing to the illness and absence of our President, and the serious illness of Mrs. T. J. Hinton, our militant Vice-President, not many regular meetings have been held during the past year. The committee



H. L. Madison

HAROLD L. MADISON
SECRETARY-TREASURER OF THE RHODE ISLAND SOCIETY



Magnolia Woodward.

MISS MAGNOLIA WOODWARD
SECRETARY OF THE EAST TENNESSEE SOCIETY

appointed to organize Junior Audubon Societies has talked to eighteen different schools, and, with the help of some bird-skins loaned by the Rev. Dr. George R. Stuart, has easily aroused the interest of adults and children. At the suggestion of Frank Flenniken and Miss Margaret Ambrose, we have furnished Educational Leaflets to various tomato clubs for their monthly meetings. We have coöperated with our Field Agent, O'C. Woodward, and have sent our literature to places where he had aroused interest. An important innovation has been the Society's request to have several deputy game-wardens—most of them ladies—appointed in East Tennessee. W. D. Houser, State Warden, having complied with our petition, the following persons have been appointed: Mrs. Walter Barton, Mrs. J. H. Renfoer, Mrs. Rosa Hall Ryno, S. R. Rambo, and J. S. Monday. By this means we hope to check the wanton destruction of bird-life in our state. We now have 125 members and many subscribers to BIRD-LORE.—MAGNOLIA WOODWARD, *Corresponding Secretary*.

Virginia.—The report of this Society for the past year shows activities gratifying to all lovers of the cause of bird-protection. During the last hunting-season the Society distributed hundreds of copies of the game-laws, and instructed many persons how they could obtain such relief as our laws provide. During the severe weather of last February, our Society, following the example of the National Association, telegraphed the newspapers of the state to remind their readers of the dire straits the birds were in. The newspapers responded promptly, and by their aid thousands of birds were undoubtedly saved from starvation. To those who wrote that they would see that the birds were fed, we sent money for the purchase of bird-food. The National Association contributed to the fund that was used for this purpose.

Beginning early in the winter, and continuing till the close of the session of the Legislature, a committee, of which Col. Jennings C. Wise, of Lexington, was chairman, and our President, M. D. Hart, waged an aggressive campaign to give Virginia a game-law fashioned after that of Alabama. Thousands of printed appeals and arguments were distributed over the state. The bill passed the Senate by a big majority, and lacked only two votes of passing the House. When the federal appropriation of \$50,000 for the enforcement of the Weeks-McLean migratory-bird law was being fought by Senator Reed and others, our Society used every influence in its power, such as having its prominent members write to Senators, or make a personal appeal to the members of the Senate committee. By this course we helped to save the appropriation.

In the Junior Audubon work, 165 classes have been organized with more than 3,000 pupils doing active work by aid of the material for study so liberally supplied by the National Association. Governor Stuart graciously consented to issue a proclamation, at the request of the Society, appointing May 4 to be observed as Bird Day; and its celebration aroused much public interest in the protection of bird-life throughout the state.



M. D. Hart

M. D. HART
PRESIDENT OF THE VIRGINIA SOCIETY

Early in June, I wrote to the presidents of our four normal schools, sending them sample leaflets and announcements, and asking them personally to see that each of their graduates received copies. I also requested that a short talk be given to the graduates, advising them to organize Junior Audubon Classes in their schools. I made an address before one Normal School, and sent literature to others. Arrangements have been made for an Audubon exhibit at the Educational Conference to be held at Richmond in November, when the officers of the Society and speakers from a distance will be on hand every day to represent the Audubon cause.

An energetic plan of campaign among the schools is now in progress, which, together with much valuable work done by Miss Katharine H. Stuart, employed as Field agent in Virginia by the National Association, aided by our President, gives us reason to hope that the next fiscal year may be a banner one for Audubon work in the Old Dominion.—MRS. R. B. SMITHEY, *Secretary*.

West Virginia.—This Society has devoted itself during the past twelve months largely to the attempt to develop a stronger sentiment for the protection and preservation of bird-life. We think we see evidence of success in the widening interest in the study and protection of birds manifest throughout our state, indications of which reach us from many sources. We see great cause for encouragement in the fact that the Society has received during the year inquiries from teachers in many parts of the state in regard to the formation of Junior Audubon Classes, and to all these words of encouragement and supplies of the leaflets of the National Association have been sent, with the gratifying result that many Junior Classes have been organized. One school in Parkersburg had 300 Junior members, under the competent leadership of Miss Kerr and Miss Mallory. From Brooke County comes a report, by an energetic and enthusiastic member, Miss Cora Reed, of eleven Junior Classes, with an aggregate membership of about 200.

The Audubon Society of the West Liberty State Normal School was organized during the year, and at once associated itself with us as a branch. The President, Miss Sanders, reports a membership of 30, and an interest that extended to the townspeople, as indicated by the very general feeding of birds and the erection of bird-houses and nesting-boxes. Several feeding-stations were established and cared for by school-boys in Parkersburg during the past winter. Last May our Society was fortunate in having a lecture from one of its members, the Rev. Earl A. Brooks, of Weston, to which the public was made welcome, and which was greatly enjoyed. Mr. Brooks is preparing a check-list of the birds of West Virginia. Our monthly meetings have been held as usual, and those in the spring and summer were devoted to field-work.—CLARA E. MARSH, *Secretary*.

Wisconsin.—The lust to kill, inherited from some cave-dwelling ancestor, is still rampant in Wisconsin, for the commandment "Thou shalt not kill"

seems regarded as uttered in a purely Pickwickian sense. Alas! until very recently education has been away from nature instead of in the direction of the world about us, which is the only actual house of life. In this state the Secretary of the Society is also the Treasurer, and in my case, at least, Field-Agent as well. About my first work was to appear before the State Federation of Woman's Clubs, when resolutions were adopted to the effect that each should appoint a committee to act with the Audubon Society in establishing Junior Classes in the public schools, and that each club should hold one public meeting annually in the interest of bird-protection. The next move was in the direction of getting new members for the State Society. An appeal was published in our official organ, *By the Wayside*, for 50,000 new members, which was subsequently sent to all the newspapers in the state with a request that they republish it and send their bill to the birds. A special appeal to the teachers of Wisconsin was made through *The Journal of Education*.

This gave the Society healthy publicity, but comparatively few new members. One of the principal handicaps in Audubon work throughout the year has been the uncertainty and irregularity in the publication of *By the Wayside*. Ex-editor Roland B. Kremers found himself unable to give the time to its duties that the position demanded. The genial new editor, Prof. A. R. Cahn, will find that the Directors have a rod in pickle for him, unless in the matter of regularity he becomes a good second to Old Faithful! Memberships were solicited also by letter, which resulted in so voluminous a correspondence that the Secretary's daughter was appointed as his efficient assistant, and the Society gradually doubled its membership. It has become generally known as the only organization in Wisconsin having for its sole aim bird-protection.

Making no special mention of what has been done in establishing Junior Classes in the schools (although, by the exertions of the National Association 115 classes, containing 1,253 members, were formed within the state), I wish to call attention to two very important things actually accomplished in Wisconsin. First, the creation of Audubon bird-refuges to the extent of 21,868 acres, Madison, Ripon, and Portage becoming cities of refuge. In fact, more land has been offered than could be properly posted this year. Prof. A. C. Burrell, of the State University, deserves special mention for invaluable services rendered in this direction. The idea of setting apart private lands as bird-sanctuaries is a popular one, and is bound to accomplish a vast amount of good. When the proposition was made to C. E. Blodgett, of Marshfield, to post his 5,000 acres of land as a bird-refuge, he not only acceded to it at once, but also gave the Audubon Society \$100, thus becoming its first patron. The second important thing accomplished was at the Game-Warden's Convention, when two-thirds of the deputy wardens became members of the Audubon Society.—VICTOR KUTCHIN, *Secretary and Treasurer*.

JOHN H. KOCH & COMPANY, Certified Public Accountants
Liberty Tower, 55 Liberty Street, New York

NEW YORK, October 24, 1914.

MESSRS. J. A. ALLEN AND T. GILBERT PEARSON,
Audit Committee,
National Association of Audubon Societies,
1974 Broadway, New York, N. Y.

Dear Sirs:—In accordance with your instructions, we have made an examination of the books, accounts and records of the National Association of Audubon Societies for the year ended October 19, 1914, and present for your scrutiny the following statements,—viz:

- EXHIBIT "A"—BALANCE SHEET OCTOBER 19, 1914.
- EXHIBIT "B"—INCOME AND EXPENSE ACCOUNT, GENERAL FUND.
- EXHIBIT "C"—INCOME AND EXPENSE, SAGE FUND.
- EXHIBIT "D"—INCOME AND EXPENSE, EGRET FUND.
- EXHIBIT "E"—INCOME AND EXPENSE, ALASKA FUND.
- EXHIBIT "F"—INCOME AND EXPENSE, CHILDREN'S FUND.
- EXHIBIT "G"—INCOME AND EXPENSE DEPARTMENT OF APPLIED ORNITHOLOGY FUND.
- EXHIBIT "H"—RECEIPTS AND DISBURSEMENTS.

An examination of all disbursements for the year was made, which we found were duly verified with approved receipted vouchers and cancelled endorsed checks.

We attended at the Safe Deposit Company's vaults and examined all investment securities, which we found in order.

Submitting the foregoing, we are

Very truly yours,

JOHN H. KOCH & CO.
Certified Public Accountants.

The Report of the Treasurer of the National Association of Audubon Societies, for Year Ending October 19, 1914

Exhibit "A"

ASSETS

<i>Cash in Banks and Office</i>		\$13,608 78
<i>Furniture and Fixtures—</i>		
Balance October 20, 1913.....	\$1,079 04	
Purchased this year.....	658 76	
	\$1,737 80	
Less: Depreciation.....	173 78	
		1,564 02
<i>Inventory of Plates, etc. (Nominal Value)</i>		500 00
<i>Bird Island Purchase, Orange Lake, Fla.</i>		250 20
<i>Buzzards Island, S. C.</i>		300 00
<i>Audubon Boats—</i>		
Balance October 20, 1913.....	\$1,891 76	
Additions this year.....		
	\$1,891 76	
Less: Depreciation.....	189 18	
		1,702 58
<i>Investments, Endowment Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....	\$358,900 00	
U. S. Mortgage & Trust Co. Bonds.....	3,000 00	
Manhattan Beach Securities Co.....	2,000 00	
		363,900 00
<i>Investments, Mary Dutcher Memorial Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....		7,100 00
Total.....		\$388,925 58

LIABILITIES

Endowment Fund—

Balance October 20, 1913.....	\$359,530 41	
Received bequest Miss Elizabeth Drummond.....	3,000 00	
Received Gift Miss H. Rhoades.....	10 00	
Received from life members.....	5,700 00	
		\$368,240 41

Mary Dulcher Memorial Fund—

Balance October 20, 1913.....	7,737 70
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Special Funds—

Mrs. Russell Sage Fund Exhibit C.....	\$2,877 49	
Egret Protection Fund, Exhibit D.....	447 57	
Alaska Fund, Exhibit E.....	1,889 70	
Children Educational Fund, Northern States, Exhibit F.	565 18	
Department of Applied Ornithology, Exhibit G.....	5,325 59	
		11,105 53

Surplus—

Surplus beginning of year.....	\$599 34	
Balance from Income Account.....	1,242 60	
		1,841 94
		\$388,925 58

INCOME AND EXPENSE ACCOUNT—General Fund

Exhibit "B"

EXPENSES

Warden Service and Reservations—

Salaries.....	\$987 50
Expenses.....	10 00
Reservation Expenses.....	61 71
Launch Expense.....	392 76

 \$1,451 97
Legislation—

Virginia.....	\$200 00
English Feather.....	100 00
Massachusetts.....	591 23
Federal.....	537 79
California.....	400 00

 1,829 02
Educational Effort—

Secretary, Salary and Expenses.....	\$6,511 95
E. H. Forbush, Salary and Expenses.....	436 06
Winthrop Packard, Salary and Expenses.....	2,496 63
W. L. Finley, Salary and Expenses.....	600 00
James Henry Rice, Salary and Expenses.....	200 00
Arthur H. Norton, Salary and Expenses.....	306 02
Press Information.....	59 06
News Correspondence.....	325 00
Bird Lore, Extra pages.....	2,328 39
Printing, Office and Field-Agents.....	1,003 49
Traveling, local workers.....	30 85
Electros and half-tones.....	1,163 92
Library.....	174 63
Slides and drawings.....	695 06
Educational Leaflets.....	267 19
Bird Lore to Members.....	2,686 95
Von Berlespch Books.....	101 46
Color Plates.....	1,352 75
Outlines.....	95 30
Field Glasses.....	43 20
Wild Bird Life and Flowers.....	197 48
Prints, charts, etc.....	141 74
Contribution to Central Texas Audubon Society.....	17 00
Contribution to New Hampshire Audubon Society.....	50 00
Contribution to Florida Audubon Society.....	375 25
Contribution to Illinois Audubon Society.....	250 00
Drawings, artist.....	105 00

 22,014 38
General Expenses—

Salary, Chief Clerk.....	\$1,365 00
Salaries, Cashier and Bookkeeper.....	1,563 17
Salary, Stenographers (four).....	2,001 24

 \$25,295 37

 \$4,929 41

Amount brought forward.....

 \$25,295 37

INCOME AND EXPENSE ACCOUNT—General Account, continued

Amount brought forward.....		\$25,295 37
Expenses brought forward.....	\$4,929 41	
<i>General Expenses, continued—</i>		
Junior Clerks (two).....	620 88	
Postage.....	1,110 68	
Telegraph and telephone.....	223 66	
Office and storeroom rents.....	1,432 50	
Legal services.....	532 03	
Auditing books.....	125 00	
Envelopes and supplies.....	459 15	
Miscellaneous.....	357 84	
Stenographic work.....	260 14	
Cartage and expressage.....	93 12	
Insurance.....	86 72	
Electric Light.....	30 10	
Returned Sales Expense.....	16 03	
Sales Department Expense.....	120 62	
Depreciation on boats.....	189 18	
Depreciation on office furniture.....	173 78	
Exchange on checks.....	27 76	
Office repairs and furnishings.....	175 26	
Annual Meeting expense.....	11 00	
Feeding birds during winter.....	130 43	
Stencils, Addressograph Machine.....	61 33	
New Members' Expenses.....	2,463 88	
		\$13,630 50
<i>Contributed to Sage Fund by the National Association of Audubon Societies.....</i>		604 98
<i>Total Expenses.....</i>		\$39,530 85
<i>Balance, Surplus for the year.....</i>		1,242 00
<i>Total.....</i>		\$40,773 45

INCOME

Members' Dues.....		\$12,307 50
Contributions.....		4,481 85
Interest from Investments.....		20,659 78
Rent of Willow Island.....		32 10
<i>Sales—</i>		
Educational Leaflets Sales.....	\$1,723 94	
Field Glasses.....	126 90	
Sale and Rental of Lantern-Slides.....	590 02	
Von Berlepsch Book Sales.....	178 90	
Bird-Lore Sales.....	316 87	
Sundry Sales.....	93 44	
Grants' Book Sales.....	85 96	
Sales of Book.....	176 19	
		\$3,292 22
<i>Total.....</i>		\$40,773 45

MRS. RUSSELL SAGE FUND

INCOME AND EXPENSE ACCOUNT

Exhibit "C"

INCOME—

Balance unexpended October 20, 1913.....	\$2,562 58
Contribution of Mrs. Russell Sage.....	5,000 00
Contribution of National Association.....	604 98
Junior Members' fees.....	1,768 70
Returned from Express Co.....	10 88

 \$9,947 14

EXPENSES—

Printing Leaflets for Junior Members.....	\$1,351 66
Colored bird pictures for Junior Members.....	1,460 00
Outline bird pictures for Junior Members.....	223 41
Expressage.....	265 80
Printing circulars.....	279 40
Printing envelopes.....	83 02
Postage on circulars and literature.....	589 50
Bird Lore subscriptions for Junior Secretaries.....	599 50
Stenographic and clerical work.....	577 63
Office rent.....	150 00
Office supplies.....	27 92
Salary and expenses Field Agent, Miss Stuart.....	1,262 48
Miscellaneous.....	13 28
Artist Drawings.....	25 00
Stencils for Secretaries.....	30 60
Buttons for Junior Members.....	130 45

 \$7,069 65

Balance unexpended October 19, 1914.....

2,877 49

 \$9,947 14

EGRET PROTECTION AND TARIFF REVISION FUND

INCOME AND EXPENSE ACCOUNT

Exhibit "D"

Income and Expense Account

INCOME—

Balance unexpended October 20, 1913.....	\$433 78	
Contributions as published in Bird Lore, Vol. XVI, Nos. 1, 2, 3, 4, 5, and 6... ..	3,365 84	
		\$3,799 62

EXPENSES—

Postage, printing, envelopes and circularizing.....	\$411 80	
Clerical Work.....	66 00	
Legal Services.....	96 00	
Telegrams.....	8 32	
Inspecting Florida Rookeries, T. G. Pearson.....	129 08	
Purchase and repairs South Carolina Bird Islands.....	115 50	
Egret Wardens' expenses.....	2,258 35	
News correspondence.....	150 00	
Half-tones.....	12 00	
British Plumage Legislation.....	100 00	
Miscellaneous.....	5 00	
		\$3,352 05
Balance unexpended, October 19, 1914.....		447 57
		\$3,799 62

ALASKAN FUND

INCOME AND EXPENSE ACCOUNT

Exhibit "E"

INCOME—

Balance unexpended October 20, 1913.....	\$1,190 90	
Contributed.....	1,000 00	
		\$2,190 90

EXPENSE—

Alaska book.....		\$301 20
Balance unexpended October 19, 1914.....		\$1,889 70
		\$2,190 90

CHILDREN'S EDUCATIONAL FUND

INCOME AND EXPENSE ACCOUNT

Exhibit "F"

INCOME—

Balance unexpended October 20, 1913.....	\$5,765 70	
Contributions.....	14,000 00	
Returns from Express Company.....	10 00	
Junior Members' Fees.....	8,480 50	
	<u> </u>	\$28,256 20

EXPENSES—

Stenographic and Clerical Help.....	\$2,064 32	
Expressage on Literature.....	1,198 10	
Artists' Drawing of Birds.....	75 00	
Colored Bird Pictures.....	9,591 15	
Report and Publicity.....	308 70	
Buttons for Junior Members.....	570 25	
Stencils for Addressograph Machine.....	131 73	
Office Rent.....	420 00	
Special Lecturer.....	287 15	
Printing Envelopes.....	134 76	
Leaflets for Junior Members.....	5,841 18	
Office Supplies.....	126 99	
Bird Lore for Junior Secretaries.....	3,089 35	
Printed Circulars.....	458 74	
Postage on Circulars and Literature.....	1,576 15	
Electros and Half-tones.....	319 50	
Outline Bird Pictures.....	1,428 74	
Miscellaneous.....	69 21	
	<u> </u>	\$27,691 02
Balance unexpended October 19, 1914.....		565 18
		<u> </u>

\$28,256 20

DEPARTMENT OF APPLIED ORNITHOLOGY

INCOME AND EXPENSE ACCOUNT

Exhibit "G"

INCOME..... \$5,932 50

EXPENSES—

Salaries.....	\$416 00	
Traveling Expenses.....	190 91	\$606 91
	<u> </u>	

Balance unexpended October 19, 1914..... 5,325 50

\$5,932 50

STATEMENT OF RECEIPTS AND DISBURSEMENTS, YEAR ENDING OCTOBER 19, 1914

RECEIPTS

Exhibit "H"

RECEIPTS—

Income on General Fund.....	\$40,773 45	
Endowment Fund.....	8,710 00	
Sage Fund.....	\$7,384 56	
Less—Contribution by National Association...	604 98	
		6,779 58
Income on Egret Fund.....	3,365 84	
Alaskan Fund.....	1,000 00	
Children Educational Fund, Northern	22,490 50	
Department of Applied Ornithology.....	5,932 50	
Total Receipts year ending, October 19, 1914.....		\$89,051 87
Cash Balance October 20, 1913.....		13,265 57
		\$102,317 44

DISBURSEMENTS—

Expense on General Fund.....	\$39,530 85	
Less—Contribution to Sage Fund.....	604 98	
		\$38,925 87
Investment on Endowment Fund.....		10,000 00
Expenses on Sage Fund.....		7,069 65
Egret Fund.....		3,352 05
Alaskan Fund.....		301 20
Children Educational Fund, Northern		27,691 02
Department of Applied Ornithology.....		606 91
Bradley Fund.....		123 00
Furniture Account.....		658 76
Unpaid bills of October 20, 1913.....		343 16
		\$89,071 62
Less—Depreciation charges on boats and furniture.....		\$362 96
Total Disbursements for the year.....		\$88,708 66
Cash Balance October 19, 1914.....		13,608 78
		\$102,317 44

NEW YORK CITY, October 26, 1914.

DR. F. A. LUCAS,
Acting President,
National Association of Audubon Societies,
New York City.

Dear Sirs—We have examined reports submitted by John H. Koch & Company, certified public accountants, on the accounts of the National Association of Audubon Societies for the year ending October 20, 1914. The account shows balance sheet of October 20, 1914, and income and expense account for the year ending the same date.

Vouchers and paid checks have been examined by them in connection with all disbursements, and also the securities in the Safe Deposit Company.

Yours very truly,

J. A. ALLEN,
T. GILBERT PEARSON,
Auditing Committee

LIST OF MEMBERS OF THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

BENEFACTOR

*Albert Wilcox.....1906

FOUNDER

Mrs. Russell Sage.....1910

PATRONS

William P. Wharton.....1909

Miss Heloise Meyer.....1912

LIFE MEMBERS

Abbott, Clinton G.....	1910	Cabot, Mrs. A. T.....	1913
Adams, Mrs. George E.....	1912	Camden, Mrs. J. N.....	1914
Alms, Mrs. Eleanora C.....	1913	Campbell, Helen Gordon.....	1909
Andrews, Mrs. E. B.....	1914	Carr, Gen. Julian S.....	1907
Armstrong, Dr. S. T.....	1913	Case, Miss Louise W.....	1914
Arnold, Benjamin Walworth.....	1914	Chapin, Chester W.....	1910
Ash, Mrs. Charles G.....	1913	Chapman, Clarence E.....	1908
Auchmuty, Mrs. R. T.....	1913	Chase, Mrs. Philip A.....	1913
Austen, Mrs. Isabel Valle.....	1914	Childs, John Lewis.....	1905
Babcock, Mrs. Perry H.....	1912	Clarke, Mrs. W. N.....	1912
Bacon, Mrs. Robert.....	1912	Clyde, W. P.....	1905
Bancroft, William P.....	1906	Comstock, Miss Clara E.....	1914
Barbey, Henry G.....	1914	Coolidge, J. Randolph.....	1913
Barnes, Miss Cora F.....	1908	Coolidge, Oliver H.....	1912
*Bates, Isaac C.....	1910	Coolidge, T. Jefferson, 3d.....	1907
Batten, George.....	1911	Crocker, Mrs. Emmons.....	1912
Baylies, Mrs. N. E.....	1912	Crosby, Maunsell S.....	1905
Beebe, Mrs. J. Arthur.....	1907	Crozier, Mrs. J. Lewis.....	1908
Beech, Mrs. Herbert.....	1914	Cudworth, Mrs. F. B.....	1911
Bennett, Mrs. Alice H.....	1914	Cutting, Mrs. W. Bayard.....	1913
Bigelow, Dr. William Sturgis.....	1912	Dane, Edward.....	1912
Bingham, Miss Harriet.....	1907	Dane, Ernest Blaney.....	1913
Bliss, Miss Catherine A.....	1911	Dane, Ernest Blaney, Jr.....	1912
Bliss, Mrs. William H.....	1912	Dane, Mrs. E. B.....	1913
Bolling, Mrs. Raynal C.....	1909	Davis, David D.....	1911
Borden, Miss Emma L.....	1914	Davis, William T.....	1910
Bowdoin, Miss Edith G.....	1911	Deering, Charles.....	1913
Bowdoin, Mrs. Temple.....	1911	Dows, Tracy.....	1914
*Bowman, Miss Sarah R.....	1905	Draper, Mrs. Henry.....	1913
Brewster, William.....	1905	E. D. T. In Memoriam.....	1914
Bridge, Mrs. Lydia E.....	1907	Earle, Carlos Y. Poitevent.....	1905
Brooks, A. L.....	1906	Earle, Miss E. Poitevent.....	1905
Brooks, Mrs. Everett W.....	1907	Eastman, George.....	1906
Brooks, Miss Fanny.....	1913	Edgar, Daniel.....	1908
Brooks, Gorman.....	1911	Elliot, Mrs. J. W.....	1912
Brooks, Peter C.....	1911	Emmons, Mrs. R. W., 2d.....	1908
Brooks, Shepherd.....	1907	Endicott, H. B.....	1908
Brooks, Mrs. Shepherd.....	1906	E. S. C.....	1913
Brown, Miss Annie H.....	1914	Farrel, Mrs. Franklin.....	1913
Brown, T. Hassall.....	1911	*Farwell, Mrs. John V., Jr.....	1909
Browning, J. Hull.....	1905	Fay, Dudley B.....	1913

*Deceased

LIFE MEMBERS, continued

Fay, Mrs. Flora Ward.....	1905	Meyer, Miss Heloise.....	1910
Fenno, Mrs. L. Carteret.....	1913	Moore, Clarence B.....	1909
Fleischmann, Julius.....	1913	Morton, Miss Mary.....	1906
Flint, Miss Jessie S. P.....	1913	Murphy, Franklin.....	1909
Foot, James D.....	1907	New Jersey Audubon Society.....	1913
Forbes, Mrs. William H.....	1914	Newman, Mrs. R. A.....	1914
Forbush, Edward Howe.....	1910	North Carolina Audubon Society.....	1905
Ford, James B.....	1913	*Osborn, Mrs. Eliza W.....	1906
French, Miss Caroline L. W.....	1911	Palmer, Mrs. William H.....	1912
*Frothingham, Howard P.....	1905	*Palmer, William J.....	1906
Frothingham, John W.....	1913	Parker, A. H.....	1908
Gallatin, F., Jr.....	1908	Parker, Edward L.....	1909
Garneau, Joseph.....	1913	Parsons, Miss Mary W.....	1913
Gazzam, Mrs. Antoinette E.....	1908	Peabody, George A.....	1914
Gifford, Mrs. Robert L.....	1908	Pearson, T. Gilbert.....	1905
Gladding, Mrs. John Russell.....	1914	Peck, Mrs. Walter L.....	1909
Goodwin, Walter L., Jr.....	1914	Perkins, Miss Ellen G.....	1914
Grant, W. W.....	1910	Perkins, Mrs. George C.....	1910
Graydon, Mrs. Clendeny.....	1913	Phillips, Mrs. Eleanor H.....	1908
Greenway, Mrs. James C.....	1912	Phillips, Mrs. John C.....	1905
Grew, Mrs. H. S.....	1913	Phillips, John C.....	1905
Haehnle, Reinhold.....	1912	Pickman, Mrs. Dudley L.....	1907
Harrah, Mrs. Charles J.....	1913	Pierrepont, Miss Anna J.....	1905
Harral, Mrs. Ellen W.....	1914	Pierrepont, John J.....	1905
Harrison, Alfred C.....	1914	Pierrepont, Mrs. R. Stuyvesant.....	1914
Havemeyer, Mrs. H. O., Jr.....	1907	*Pinchot, Mrs. J. W.....	1906
Hawkins, Rush C.....	1913	Poland, James P.....	1909
Hearst, Mrs. Phoebe A.....	1909	Potts, Thomas.....	1905
Hemenway, Mrs. Augustus.....	1905	Pratt, George D.....	1911
Hentz, Leonard L.....	1914	Prime, Miss Cornelia.....	1909
Hoffman, Samuel V.....	1907	Rainsford, Dr. W. S.....	1913
Hopewell, Frank.....	1911	Reed, Mrs. William Howell.....	1905
Hornbrooke, Mrs. Frances B.....	1913	Renwick, Mrs. Ilka H.....	1914
Hostetter, D. Herbert.....	1907	Reynolds, R. J.....	1908
Houghton, Miss Elizabeth G.....	1914	Roberts, Miss Frances A.....	1914
Hunnewell, H. S.....	1905	Rockefeller, William G.....	1912
Huntington, Archer M.....	1905	Rogers, Charles H.....	1912
Jackson, Mrs. James.....	1908	Rogers, Dudley P.....	1914
Jamison, Margaret A.....	1914	Ropes, Mrs. Mary G.....	1913
Kettle, Mrs. L. N.....	1913	Russell, Mrs. Gordon W.....	1914
Kidder, Nathaniel T.....	1905	Sage, Mrs. Russell.....	1905
Kilmer, Willis Sharpe.....	1907	Saltonstall, John L.....	1908
Kinney, Morris.....	1913	Satterlee, Mrs. Herbert L.....	1906
Kittredge, Miss Sarah N.....	1914	Schley, Grant B.....	1914
Knight, Miss A. C.....	1913	Schroeder, Miss Lizzie H.....	1911
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Lane, Benjamin C.....	1909	Shattuck, Mrs. F. C.....	1906
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Mason, Miss Fanny P.....	1912	Thayer, John E.....	1909
Mason, George Grant.....	1914	Thompson, Mrs. Frederick F.....	1908
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Mershon, W. B.....	1914	Torrey, Mrs. Alice W.....	1913

*Deceased

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Van Brunt, Mrs. Charles.....	1912	Weeks, Henry de Forest.....	1909
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Webb, J. Griswold.....	1913	Wyman, Mrs. Alfred E.....	1914
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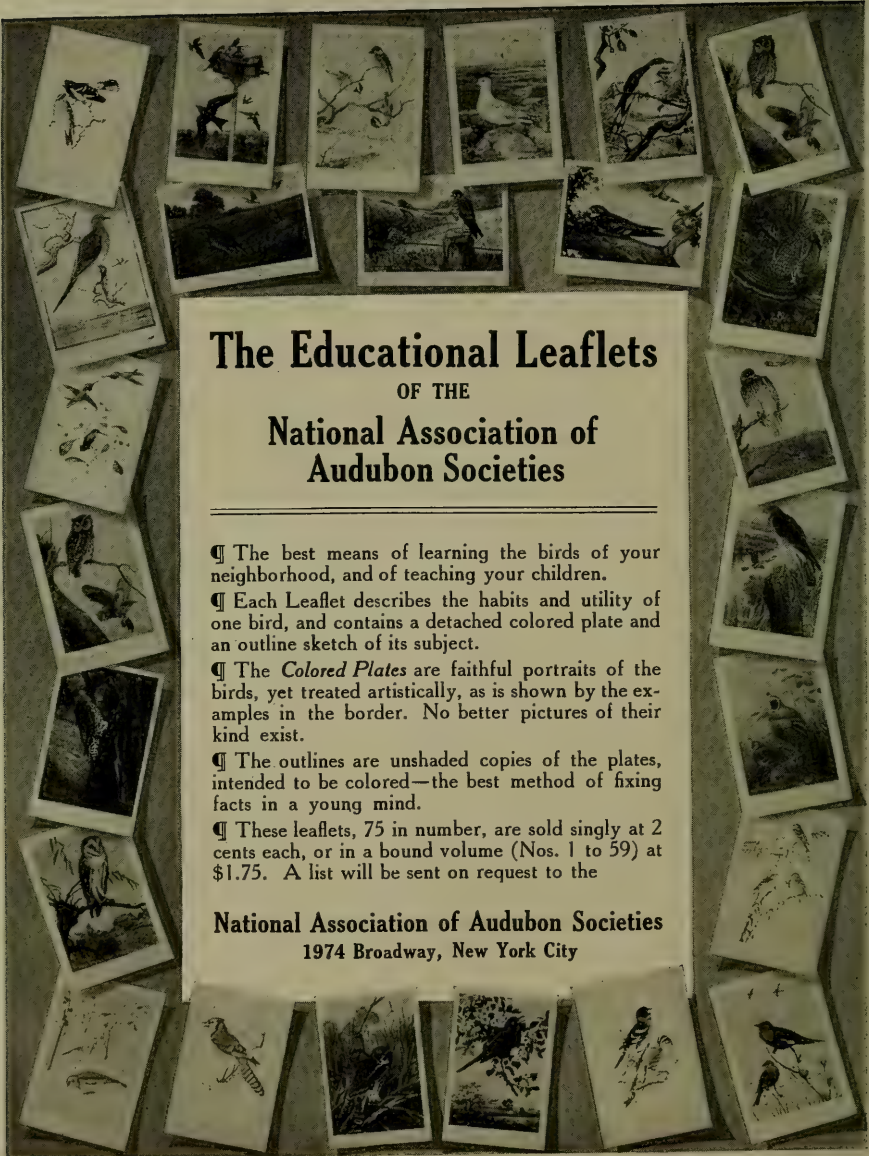
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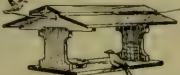
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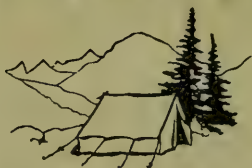
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